Author Index Volume 54, 2001

A

Abe, Hitoshi.
Revision of the Structure of a New Coumarin Isolated from *Artemisia carviforia* Wall. 319

Abe, Noritaka.
Reductive Cyclization of 8-(2-Nitrophenyl)-1-azaazulene Derivatives; Formation of 6a,7-Diazanaphth[3,2,1-*cd*]-azulene and 7*H*-1,7-Diazaindeno[1,2-*e*]azulene Systems, a New DNA Intercalater. 329

Aikawa, Kohsuke.
Lewis Acid Catalysis of Second-Generation Metallosalen Complexes: An Explanation for Stereochemistry of Asymmetric Hetero Diels-Alder Reaction. 395

Akasaka, Takeshi.
Photoinduced Electron-Transfer Reactions between C_{60} and Cyclic Disiliranes (c-R_2Si-X-SiR_2; X=SiR_2, CH_2, O, NPh, S). 777

Alvarez, Miriam.
Resolution and Absolute Configurational Assignments to 1-Oxa- and 1-Thia-6-ketospiro[4.4]nonanyl Platforms. 49

Amano, Tetsuya.
Synthesis and Biological Evaluation of Water Soluble Taxoids Bearing Sugar Moieties. 561

Ando, Akira.
Synthesis of α-(Trifluoromethyl)pyrrolidines by Cyclization of *N*-Tosyl-α-(trifluoromethyl)homoallylamine Derivatives. 589

Ando, Masayoshi.
Two Taxoids from *Taxus cuspidata* as Modulators of Multidrag Resistant Tumor Cells. 999

Aoyagi, Taiyo.
A Molecule Detection Sensor of Modified Cyclodextrin Based on Guest-responsive Intramolecular Fluorescence Quenching. 597

Aoyama, Kinuyo.
1,3-Dipolar Cycloaddition of 1-Phenylpropa-1,2-diene with Pyridinium Dicyanomethylides: 1-Phenylpropa-1,2-diene as a Synthetic Equivalent of 1-Phenylpropyne. 611

Aoyama, Toyohiko.
Cycloaddition Reactions of Trimethylsilylketene with 8-Azaheptafulvenes and 6-Amino-1-azafulvenes. 209

Asakawa, Yoshinori.
Biotransformation of Terpenoids from the Crude Drugs and Animal Origin by Microorganisms. 529

Asakawa, Yoshinori.
Sesquiterpene Lactones and Acetogenin Lactones from the Hepaticae and Chemosystematics of the Liverworts *Frullania*, *Plagiochila* and *Porella*. 1057

Asao, Toyonobu.
Reaction of 2-Aminoazulenes with Aldehydes. One Pot Synthesis of Diazuleno[2,1-*b*:1,2-*e*]pyridines. 667

Aso, Yoshio.
Bis(ethylenethio)tetraselenafulvalene and Related Hybrid Diselenadithiafulvalenes as Novel Electron Donors Forming Highly Conductive Complexes with 7,7,8,8-Tetracyanoquinodimethane. 225

B

Bando, Masahiko.
An Efficient Synthesis of Optical Isomers of Vasopressin V_2 Receptor Antagonist OPC-41061 by Lipase-catalyzed Enantioselective Transesterification. 131

Bibart, Richard Todd.
Resolution and Absolute Configurational Assignments to 1-Oxa- and 1-Thia-6-ketospiro[4.4]nonanyl Platforms. 49

Bickelhaupt, Friedrich.
3-Aza[5]metacyclophanes: Synthesis and Reactions. 799

Bouaziz, Zouhair.
Cycloadditions of α,β-Unsaturated *N,N*-Dimethylhydrazones. A Diels-Alder Strategy for the Building of Aza-Hetero Rings. 1095

Button, Martin A. C.
Xanthate Mediated Generation of the Benzotriazol-1-ylmethyl Radical and Its Subsequent Addition to a Variety of Olefins. 301

C

Chong, Hyun-Soon.
Synthesis and Alkali Metal Picrate Extraction Studies of an Unusual Cage-functionalized Cryptand. 151

Chou, Chuan-Hung.
Photochemistry of Pyrazino- and Quinoxalino-fused Naphthobarrelenes. 61

D

Daïch, Adam.
Azepine and [1,3]Oxazepine Fused Ring Construction through a Cationic Cyclization: An *N*-Acyliminium Ion Trapping of an Oxygen Atom or Olefin. 275

D'Auria, Maurizio.
Photochemical Dimerization in Solution of Heterocyclic Substituted Alkenes Bearing an Electron Withdrawing Group. 475

Decroix, Bernard.
Azepine and [1,3]Oxazepine Fused Ring Construction through a Cationic Cyclization: An *N*-Acyliminium Ion Trapping of an Oxygen Atom or Olefin. 275

de Kanter, Franciscus J. J.
3-Aza[5]metacyclophanes: Synthesis and Reactions. 799

Denisenko, Sergey N.
Xanthate Mediated Generation of the Benzotriazol-1-ylmethyl Radical and Its Subsequent Addition to a Variety of Olefins. 301

de Rijke, Marianne.
3-Aza[5]metacyclophanes: Synthesis and Reactions. 799

de Wolf, Willem H.
3-Aza[5]metacyclophanes: Synthesis and Reactions. 799

E

Egberts, Arne.
3-Aza[5]metacyclophanes: Synthesis and Reactions. 799

El Blaly, Serry A. A.
5-*endo-trig* Radical Cyclization of *N*- Benzyl-2-halo-*N*-(6-oxo-1-cyclohexen-1-yl)acetamides. 1021

El Hassane, Lahlou.
Sesquiterpene Lactones and Acetogenin Lactones from the Hepaticae and Chemosystematics of the Liverworts *Frullania*, *Plagiochila* and *Porella*. 1057

Emoto, Yoshitaka.
Photochemistry of Heterocyclic Cage Compound: Photoreaction of 2,7-Dihydroazepine to Give 2,3-Dihydroazepine and Photoreaction of the 2,3-Dihydroazepine to Form 1,2-Dihydroaniline. 567

Enoki, Toshiaki.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Esumi, Tomoyuki.
Concise Synthesis of (3*R*,4*S*)-3-Hydroxy-4-methyl-γ-butyrolactone. 69

F

Fabris, Fabrizio.
Resolution and Absolute Configurational Assignments to 1-Oxa- and 1-Thia-6-ketospiro[4.4]nonanyl Platforms. 49

Fillion, Houda.
Cycloadditions of α,β-Unsaturated *N,N*-Dimethylhydrazones. A Diels-Alder Strategy for the Building of Aza-Hetero Rings. 1095

Fujii, Hiroyuki.
Reductive Cyclization of 8-(2-Nitrophenyl)-1-azaazulene Derivatives; Formation of 6a,7-Diazanaphth[3,2,1-*cd*]-azulene and 7*H*-1,7-Diazaindeno[1,2-*e*]azulene Systems, a New DNA Intercalater. 329

Fujii, Kazushige.
Synthesis of 2,5-Disubstituted Tetrahydrofurans Catalyzed by Palladium(0). 419

Fujii, Masako.
Revision of the Structure of a New Coumarin Isolated from *Artemisia carviforia* Wall. 319

Fujimori, Kunihide.
Preparation, Structure, and Properties of 1,3-Bis(1,4-dithiafulven-6-yl)azulenes. 377

Fujioka, Shozo.
Efficient and Stereoselective β-Epoxidation of the 16(17)-Double Bond of Gibberellic Acid Derivatives with an Acylperoxy Radical Generated by Irradiation of α-Diketones and Oxygen. 81

Fujisawa, Naoki.
Preparation, Structure, and Properties of 1,3-Bis(1,4-dithiafulven-6-yl)azulenes. 377

Fujita, Kasuke.
Synthesis of α,α'-Asymmetric Nitroxide Radicals by *C*- or *O*-Acylation of Radical-Enolate Intermediates Generated by Reduction of Homoallylic Nitro Enones with Samarium (II) Iodide. 217

Fujitsuka, Mamoru.
Photoinduced Electron-Transfer Reactions between C_{60} and Cyclic Disiliranes (c-R_2Si-X-SiR_2; X=SiR_2, CH_2, O, NPh, S). 777

Fujiwara, Kenshu.
Benzyloxymethyl Group as a Convertible Internal Ligand for La(OTf)$_3$-catalyzed 7-*endo* Ring-Openig of Hydroxy

Epoxide. 109

Fukai, Toshio.
Structure of Sanggenon O, a Diels-Alder Type Adduct Derived from a Chalcone and a Dehydroprenylated Sanggenon-Type Flavanone from *Morus cathayana*. 639

Fukazawa, Yoshimasa.
Intramolecular Complex Formation between Flexible Molecular Tweezers and Weak Electron Acceptor. 849

Fukuta, Atsushi.
Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

Fukuyama, Tohru.
A Practical Route to Quinolines from Anilines. 105

Fukuyama, Yoshiyasu.
Total Syntheses of Plagiochins A and D, Macrocyclic Bis(bibenzyls), by Pd(0) Catalyzed Intramolecular Stille-Kelly Reaction. 259

Fumoto, Yumiko.
Preparation of Meso-unsubstituted Porphyrins Substituted with Mono- and Tetraformyl and Other Electron-withdrawing Groups. 705

Funaki, Takashi.
Synthesis of Pyridinocrownophanes Exhibiting High Ag^+-Affinity. 123

Funayama, Shinji.
Quinoline Alkaloids of *Orixa japonica*. 1139

Furukawa, Yoshiro.
Synthesis of *N*-Boc-3-amino-1,2-epoxy-4-phenylbutane from (3*S*)-Hydroxy-γ-butyrolactone by Means of the Hofmann Rearrangement. 77

Furuta, Shinji.
Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

G

Gažák, R.
Chemoenzymatic Preparation of Oligoglycosides of Silybin, the Flavonolignan from *Silybum marianum*. 901

Gebert, Andreas.
Synthesis of 1,3-Thiazolidines from Aromatic Thioketones and *N*-Benzylidene α-Amino Acid Esters *via* 1,3-Dipolar Cycloaddition of Azomethine Ylides. 691

Gret, Norbert.
3-Aza[5]metacyclophanes: Synthesis and Reactions. 799

Gruza, Henryk.
Efficient Stereoselective Synthesis of (2*S*,3*S*,5*R*)-(+)-Preussin. 581

H

Hagino, Yasumichi.
A Convenient Determination of Chiral Pteridines; Application of Fluorescence Detected Circular Dichroism (FDCD) to the Major Pterin from *Escherichia coli*. 283

Halada, P.
Chemoenzymatic Preparation of Oligoglycosides of Silybin, the Flavonolignan from *Silybum marianum*. 901

Hamada, Masahiro.
Stereospecific Substitution of 1-(2-Pyridinyl)ethyl Methanesulfonate with *S*- and *O*-Nucleophiles. 735

Hamada, Yasumasa.
Synthesis of 2,5-Disubstituted Tetrahydrofurans Catalyzed by Palladium(0). 419

Hara, Kenji.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Hara, Ko-ji.
Synthesis and Biological Evaluation of Water Soluble Taxoids Bearing Sugar Moieties. 561

Hara, Ko-zo.
Synthesis and Biological Evaluation of Water Soluble Taxoids Bearing Sugar Moieties. 561

Hara, Osamu.
Synthesis of 2,5-Disubstituted Tetrahydrofurans Catalyzed by Palladium(0). 419

Harada, Kazuho.
Formation of Trisubstituted γ-Butyrolactones by Novel Ring Transformation of 2-Isoxazoline-2-oxides. 1033

Harayama, Takashi.
Revision of the Structure of a New Coumarin Isolated from *Artemisia carviforia* Wall. 319

Hariprakasha, H. K.
Synthesis and Alkali Metal Picrate Extraction Studies of an Unusual Cage-functionalized Cryptand. 151

Hashimoto, Kimiko.
Synthesis of Alternariolide Analogs for Photoaffinity-Labeling. 917

Hashimoto, Shunichi.
Enantiocontrol in Tandem Allylic Sulfonium Ylide Generation and [2,3] Sigmatropic Rearrangement Catalyzed by Chiral Dirhodium(II) Complexes. 623

Hashimoto, Toshihiro.

Biotransformation of Terpenoids from the Crude Drugs and Animal Origin by Microorganisms. 529

Hashimoto, Toshihiro.

Sesquiterpene Lactones and Acetogenin Lactones from the Hepaticae and Chemosystematics of the Liverworts *Frullania*, *Plagiochila* and *Porella*. 1057

Hatakeyama, Susumi.

Concise Synthesis of (3*R*,4*S*)-3-Hydroxy-4-methyl-γ-butyrolactone. 69

Hatanaka, Minoru.

Application of Phthalimidine Synthesis with Use of 1,2,3-1*H*-Benzotriazole and 2-Mercaptoethanol as Dual Synthetic Auxiliaries. 2. Effective Synthesis of Phthalimidines Possessing Bulky Group at 2-Position. 635

Hatsui, Toshihide.

Intramolecular Photocycloaddition of 2-Cycloalkenyl-1,3-dioxin-4-one. Stereoselective Synthesis of *cis*-Eudesmane-4,11-diols. 765

Hayashi, Naoto.

1,3-Dipolar Cycloaddition of 1-Phenylpropa-1,2-diene with Pyridinium Dicyanomethylides: 1-Phenylpropa-1,2-diene as a Synthetic Equivalent of 1-Phenylpropyne. 611

Heimgartner, Heinz.

Synthesis of 1,3-Thiazolidines from Aromatic Thioketones and *N*-Benzylidene α-Amino Acid Esters *via* 1,3-Dipolar Cycloaddition of Azomethine Ylides. 691

Higashiyama, Kimio.

Photosubstitution Reaction of Cyanoaromatics with Aliphatic Amides. 1027

Hinoue, Kazumasa.

Synthesis of *N*-Boc-3-amino-1,2-epoxy-4-phenylbutane from (3*S*)-Hydroxy-γ-butyrolactone by Means of the Hofmann Rearrangement. 77

Hirama, Masahiro.

Contributions of Professor Sho Ito in Organic Chemistry. 7

Hirama, Masahiro.

Convergent Strategy for Synthesizing Polycyclic Ether Marine Toxins: Synthesis of the ABCDE Ring Fragment of Ciguatoxin CTX3C. 93

Hirano, Etsushi.

Application of Phthalimidine Synthesis with Use of 1,2,3-1*H*-Benzotriazole and 2-Mercaptoethanol as Dual Synthetic Auxiliaries. 2. Effective Synthesis of Phthalimidines Possessing Bulky Group at 2-Position. 635

Hirano, Yukiyasu.

Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

Hirao, Ken-Ichi.

Synthesis of α,α'-Asymmetric Nitroxide Radicals by *C*- or *O*-Acylation of Radical-Enolate Intermediates Generated by Reduction of Homoallylic Nitro Enones with Samarium (II) Iodide. 217

Hirata, Naonori.

Two Taxoids from *Taxus cuspidata* as Modulators of Multidrag Resistant Tumor Cells. 999

Hiroi, Kunio.

Asymmetric Pauson-Khand Reactions of Chiral Sulfinamides: Asymmetric Synthesis of 3-Azabicyclo[3.3.0]oct-5-en-7-one Derivatives. 73

Hirose, Katutoshi.

Two Taxoids from *Taxus cuspidata* as Modulators of Multidrag Resistant Tumor Cells. 999

Hirotani, Seiko.

Formation of Trisubstituted γ-Butyrolactones by Novel Ring Transformation of 2-Isoxazoline-2-oxides. 1033

Hirowatari, Katsuji.

1,3-Dipolar Cycloadditions of 3-Bromo-1,5- and 3-Bromo-1,7-azulenequinones with Diazomethane, Diphenylnitrilimine, and Benzonitrile Oxide. 291

Holzer, Wolfgang.

Synthesis of Azanaphthoquinone Annelated Pyrroles. 111

Honda, Konomi.

Synthesis of 2,3,4,5-Tetrahydro-1*H*-2-benzazepines *via* Pummerer-Type Cyclization of *N*-Arylmethyl-*N*-(3-phenylsulfinylpropyl)formamides. 967

Honda, Toshio.

Diastereoselective Addition of Organometallic Reagents to (*R*)-2,3-Isopropylidenedioxy-1-(2-furyl)-1-propanone Yielding Chiral Tertiary Furyl Carbinols. 341

Hong, Young-Taek.

Palladium-catalyzed Carbonylative Coupling of Hypervalent Iodonium Salts with Amidoximes: Synthesis of Oxadiazoles. 985

Hongo, Hiroshi.

Synthesis of New Chiral Catalysts, 2-Azanorbornyloxazolidines, for Enantioselective Addition of Diethylzinc to Aldehydes. 411

Hori, Mikio.

Synthesis and Properties of Novel Medium-sized Heterocyclic Compounds Containing Two Sulfur Atoms in the Ring and Synthetic Approaches to Conjugated Cyclic Disulfonium Ylides. 139

Horiguchi, Yoshie.

Synthesis of 2,3,4,5-Tetrahydro-1*H*-2-benzazepines *via* Pummerer-Type Cyclization of *N*-Arylmethyl-*N*-(3-phenylsulfinylpropyl)formamides. 967

Hoshino, Mikio.

Efficient and Stereoselective β-Epoxidation of the 16(17)-Double Bond of Gibberellic Acid Derivatives with an Acylperoxy Radical Generated by Irradiation of α-Diketones and Oxygen. 81

I

Ichinose, Hiroshi.
A Convenient Determination of Chiral Pteridines; Application of Fluorescence Detected Circular Dichroism (FDCD) to the Major Pterin from *Escherichia coli*. 283

Ihara, Masataka.
Synthesis of a Novel Artemisinin Analogue Having Potent Antimalarial Activity. 607

Ikeda, Masazumi.
Regioselective Synthesis of Bridged Azabicyclic Compounds Using Radical Translocation/Cyclization Reactions of 4-Alkynyl-1-(*o*-iodobenzoyl)piperidines. 747

Ikeda, Masazumi.
5-*endo-trig* Radical Cyclization of *N*- Benzyl-2-halo-*N*-(6-oxo-1-cyclohexen-1-yl)acetamides. 1021

Ikemi, Yukio.
1,3-Dipolar Cycloaddition of 1-Phenylpropa-1,2-diene with Pyridinium Dicyanomethylides: 1-Phenylpropa-1,2-diene as a Synthetic Equivalent of 1-Phenylpropyne. 611

Ikemoto, Isao.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Ikemoto, Kazuhisa.
A Convenient Determination of Chiral Pteridines; Application of Fluorescence Detected Circular Dichroism (FDCD) to the Major Pterin from *Escherichia coli*. 283

Imafuku, Kimiaki.
New Synthetic Approach to Azuleno[1,2-*c*]pyrroles and Conversion to Benz[*a*]azulenes. 647

Imagawa, Hiroshi.
Intramolecular Oxymercuration of 4-Hexen-1-ols: Kinetic *vs.* Thermodynamic Products Regulated by Mercuric Salts. 629

Inokuma, Seiichi.
Synthesis of Pyridinocrownophanes Exhibiting High Ag^+-Affinity. 123

Irie, Ryo.
Lewis Acid Catalysis of Second-Generation Metallosalen Complexes: An Explanation for Stereochemistry of Asymmetric Hetero Diels-Alder Reaction. 395

Ishikawa, Tsutomu.
Alternative Synthesis of B/C-*cis* Hexahydrobenzo[*c*]-phenanthridine from 2-Phenyl-1-tetralone. 433

Ishikawa, Tsutomu.
Triphosgene: A Versatile Reagent for Bischler-Napieralski Reaction. 437

Isobe, Minoru.
Synthesis of Ciguatoxin (2*S*,5*R*)-ABC Segment. 789

Ito, Osamu.
Photoinduced Electron-Transfer Reactions between C_{60} and Cyclic Disiliranes (c-R_2Si-X-SiR_2; X=SiR_2, CH_2, O, NPh, S). 777

Ito, Shunji.
Reaction of 2-Aminoazulenes with Aldehydes. One Pot Synthesis of Diazuleno[2,1-*b*:1,2-*e*]pyridines. 667

Ito, Shunji.
An Efficient Preparation of 2*H*-Cyclohepta[*b*]furan-2-ones. 679

Ito, Suketaka.
Preparation of New Nitrogen-bridged Heterocycles. 50. Syntheses of Some Heterocyclic Compounds Starting from Pyridinium 1-(Ethoxycarbonylacetyl)methylides. 185

Ito, Suketaka.
Thermolysis of Ethoxycarbonyl[2-phenyl-2-(phenylsulfonylhydrazono)ethyl]methylenetriphenylphosphoranes. Formation of Substituted Pyridazinones. 237

Iwabuchi, Yoshiharu.
Concise Synthesis of (3*R*,4*S*)-3-Hydroxy-4-methyl-γ-butyrolactone. 69

Iwasa, Kazuto.
Synthesis of New Chiral Catalysts, 2-Azanorbornyloxazolidines, for Enantioselective Addition of Diethylzinc to Aldehydes. 411

Iwatani, Wakao.
Synthesis and Biological Evaluation of Water Soluble Taxoids Bearing Sugar Moieties. 561

Iyoda, Masahiko.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

J

Jigami, Tetsuya.
Bis(ethylenethio)tetraselenafulvalene and Related Hybrid Diselenadithiafulvalenes as Novel Electron Donors Forming Highly Conductive Complexes with 7,7,8,8-Tetracyanoquinodimethane. 225

Jonoshita, Shuichi.
Synthesis of α-(Trifluoromethyl)pyrrolidines by Cyclization of *N*-Tosyl-α-(trifluoromethyl)homoallylamine Deriva-

tives. 589

Jurczak, Janusz.

Efficient Stereoselective Synthesis of (2*S*,3*S*,5*R*)-(+)-Preussin. 581

K

Kageura, Yuichi.

Reductive Cyclization of 8-(2-Nitrophenyl)-1-azaazulene Derivatives; Formation of 6a,7-Diazanaphth[3,2,1-*cd*]-azulene and 7*H*-1,7-Diazaindeno[1,2-*e*]azulene Systems, a New DNA Intercalater. 329

Kaji, Eisuke.

Formation of Trisubstituted γ-Butyrolactones by Novel Ring Transformation of 2-Isoxazoline-2-oxides. 1033

Kajikawa, Shougo.

Convenient Construction of Hexahydrobenzo[*b*]furan Skeleton Containing Heteroatoms. Choice of Mn(III)- and Ce(IV)-based Radical Cyclization. 171

Kajioka, Takanori.

Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

Kakehi, Akikazu.

Preparation of New Nitrogen-bridged Heterocycles. 50. Syntheses of Some Heterocyclic Compounds Starting from Pyridinium 1-(Ethoxycarbonylacetyl)methylides. 185

Kakehi, Akikazu.

Thermolysis of Ethoxycarbonyl[2-phenyl-2-(phenylsulfonylhydrazono)ethyl]methylenetriphenylphosphoranes. Formation of Substituted Pyridazinones. 237

Kakehi, Akikazu.

Reductive Cyclization of 8-(2-Nitrophenyl)-1-azaazulene Derivatives; Formation of 6a,7-Diazanaphth[3,2,1-*cd*]-azulene and 7*H*-1,7-Diazaindeno[1,2-*e*]azulene Systems, a New DNA Intercalater. 329

Kakehi, Akikazu.

1,3-Dipolar Cycloaddition of 1-Phenylpropa-1,2-diene with Pyridinium Dicyanomethylides: 1-Phenylpropa-1,2-diene as a Synthetic Equivalent of 1-Phenylpropyne. 611

Kako, Masahiro.

Photoinduced Electron-Transfer Reactions between C_{60} and Cyclic Disiliranes (c-R_2Si-X-SiR_2; X=SiR_2, CH_2, O, NPh, S). 777

Kamimura, Shigeki.

Application of Phthalimidine Synthesis with Use of 1,2,3-1*H*-Benzotriazole and 2-Mercaptoethanol as Dual Synthetic Auxiliaries. 2. Effective Synthesis of Phthalimidines Possessing Bulky Group at 2-Position. 635

Kang, Suk-Ku.

Palladium-catalyzed Carbonylative Coupling of Hypervalent Iodonium Salts with Amidoximes: Synthesis of Oxadiazoles. 985

Kashima, Choji.

Preparation of β-Substituted γ-Keto Esters by the Grignard Reaction on *N*-Acylpyrazoles. 309

Kashima, Terumi.

Intramolecular Oxymercuration of 4-Hexen-1-ols: Kinetic *vs.* Thermodynamic Products Regulated by Mercuric Salts. 629

Katagiri, Ruriko.

Synthesis of a Novel Artemisinin Analogue Having Potent Antimalarial Activity. 607

Kataoka, Masahiro.

Solvent Effects on Relative Stability of Meridine and Its Tautomer: MO Calculations. 55

Kataoka, Tadashi.

Synthesis and Properties of Novel Medium-sized Heterocyclic Compounds Containing Two Sulfur Atoms in the Ring and Synthetic Approaches to Conjugated Cyclic Disulfonium Ylides. 139

Kato, Masako.

Optical Resolution of 2-Azabicyclo[2.2.1]hept-5-en-3-one by Inclusion Complexation with Brucine. 405

Kato, Masako.

Synthesis, Structure and Spectroscopic Characteristics of 2'-Boryl-4"-dimethylaminochalcones. Effect of an Intramolecular Boron-Oxygen Coordinate Bond to the Conjugated System. 929

Kato, Nobuo.

1,3-Dipolar Cycloadditions of 3-Bromo-1,5- and 3-Bromo-1,7-azulenequinones with Diazomethane, Diphenylnitrilimine, and Benzonitrile Oxide. 291

Kato, Takehiro.

Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Katoh, Tadashi.

An Efficient and Expeditious Synthesis of a Novel 5*H*-Naphth[1',2':5,6][1,4]oxazino[2,3-*b*]quinoxalin-5-one and Its Unique Inhibitory Activity against a Panel of Human Cancer Cell Lines. 619

Katritzky, Alan R.

Xanthate Mediated Generation of the Benzotriazol-1-ylmethyl Radical and Its Subsequent Addition to a Variety of Olefins. 301

Katsuki, Tsutomu.

Lewis Acid Catalysis of Second-Generation Metallosalen Complexes: An Explanation for Stereochemistry of

Asymmetric Hetero Diels-Alder Reaction. 395

Katsumura, Shigeo.

Synthesis of *N*-Boc-3-amino-1,2-epoxy-4-phenylbutane from (3*S*)-Hydroxy-γ-butyrolactone by Means of the Hofmann Rearrangement. 77

Katsuno, Keiko.

Revision of the Structure of a New Coumarin Isolated from *Artemisia carviforia* Wall. 319

Katsuyama, Isamu.

The Identification, Mechanism, and Improved Synthesis of a New and Unique Heterocyclic System with a Fused Imidazole Ring. 721

Kawakami, Teruki.

Application of Phthalimidine Synthesis with Use of 1,2,3-1*H*-Benzotriazole and 2-Mercaptoethanol as Dual Synthetic Auxiliaries. 2. Effective Synthesis of Phthalimidines Possessing Bulky Group at 2-Position. 635

Kawakami, Yusuke.

Substitution *vs.* Addition. Regioselective Electrobromination of Benzofuran. 825

Kawano, Yoshikazu.

An Efficient Synthesis of Optical Isomers of Vasopressin V_2 Receptor Antagonist OPC-41061 by Lipase-catalyzed Enantioselective Transesterification. 131

Khalil, Ashraf A.

The Identification, Mechanism, and Improved Synthesis of a New and Unique Heterocyclic System with a Fused Imidazole Ring. 721

Kido, Masaru.

An Efficient Synthesis of Optical Isomers of Vasopressin V_2 Receptor Antagonist OPC-41061 by Lipase-catalyzed Enantioselective Transesterification. 131

Kim, Eun Young.

Synthesis of a Macroheterocyclic Compound through Photodecarboxylation of Potassium ω-Phthalimidoalkynoate. 1049

Kim, Ho Sik.

Quinolone Analogues 3. Synthesis of 1,3-Dialkyl-4-oxo-1,4-dihydropyridazino[3,4-*b*]quinoxalines. 359

Kim, Hye-Sook.

Synthesis of a Novel Artemisinin Analogue Having Potent Antimalarial Activity. 607

Kimino, Mako.

Application of Phthalimidine Synthesis with Use of 1,2,3-1*H*-Benzotriazole and 2-Mercaptoethanol as Dual Synthetic Auxiliaries. 2. Effective Synthesis of Phthalimidines Possessing Bulky Group at 2-Position. 635

Kimura, Koichi.

Synthesis of Pyridinocrownophanes Exhibiting High Ag^+-Affinity. 123

Kimura, Tomoko.

Synthesis of 2,3,4,5-Tetrahydro-1*H*-2-benzazepines *via* Pummerer-Type Cyclization of *N*-Arylmethyl-*N*-(3-phenylsulfinylpropyl)formamides. 967

Kishi, Akinobu.

Chemical Constituents of Two Oriental Orchids, *Calanthe discolor* and *C. liukiuensis*: Precursor Indole Glycoside of Tryptanthrin and Indirubin. 957

Kishimoto, Yaeko.

Quinolone Analogues 3. Synthesis of 1,3-Dialkyl-4-oxo-1,4-dihydropyridazino[3,4-*b*]quinoxalines. 359

Kitagaki, Shinji.

Enantiocontrol in Tandem Allylic Sulfonium Ylide Generation and [2,3] Sigmatropic Rearrangement Catalyzed by Chiral Dirhodium(II) Complexes. 623

Kitahara, Takeshi.

Synthesis of Brevicompanines, Plant Growth Regulators. 727

Kitajima, Hidehiko.

Application of Phthalimidine Synthesis with Use of 1,2,3-1*H*-Benzotriazole and 2-Mercaptoethanol as Dual Synthetic Auxiliaries. 2. Effective Synthesis of Phthalimidines Possessing Bulky Group at 2-Position. 635

Kitano, Kazuyoshi.

An Efficient Synthesis of Optical Isomers of Vasopressin V_2 Receptor Antagonist OPC-41061 by Lipase-catalyzed Enantioselective Transesterification. 131

Kobayashi, Kaoru.

Photoinduced Electron-Transfer Reactions between C_{60} and Cyclic Disiliranes (c-R_2Si-X-SiR_2; X=SiR_2, CH_2, O, NPh, S). 777

Kočevar, Marijan.

4-Acylhydrazinomethylene-2-phenyloxazol-5(4*H*)-ones as Acylating Agents: Synthesis of Salicylanilides and 1,2,4-Triazolo[4,3-*b*]pyridazines. 1011

Kodama, Mitsuaki.

Total Syntheses of Plagiochins A and D, Macrocyclic Bis(bibenzyls), by Pd(0) Catalyzed Intramolecular Stille-Kelly Reaction. 259

Kodani, Mie.

Bis(ethylenethio)tetraselenafulvalene and Related Hybrid Diselenadithiafulvalenes as Novel Electron Donors Forming Highly Conductive Complexes with 7,7,8,8-Tetracyanoquinodimethane. 225

Kokubo, Susumu.

Haterumaimides A-E, Five New Dichlorolissoclimide-Type Diterpenoids from an Ascidian, *Lissoclinum* Sp. 1039

Konakahara, Takeo.

Reductive Cyclization of 8-(2-Nitrophenyl)-1-azaazulene Derivatives; Formation of 6a,7-Diazanaphth[3,2,1-*cd*]-azulene and 7*H*-1,7-Diazaindeno[1,2-*e*]azulene Systems, a New DNA Intercalater. 329

Kosugi, Katsuhiko.

Two Taxoids from *Taxus cuspidata* as Modulators of Multidrag Resistant Tumor Cells. 999

Koulouri, Alexandra.
Synthesis of Azanaphthoquinone Annelated Pyrroles. 111

Kozawa, Kozo.
Synthesis and Properties of Benzimidazole and Naphthoimidazole Derivatives of Perylenedicarboximide. 757

Krasiński, Antoni.
Efficient Stereoselective Synthesis of (2*S*,3*S*,5*R*)-(+)-Preussin. 581

Krassnig, Roland.
Synthesis and Pharmacological Evaluation of 18,19-Dehydrobuprenorphine. 989

Kratzel, Martin.
Synthesis of Azanaphthoquinone Annelated Pyrroles. 111

Křen, V.
Chemoenzymatic Preparation of Oligoglycosides of Silybin, the Flavonolignan from *Silybum marianum*. 901

Krenn, Petra.
Synthesis of Azanaphthoquinone Annelated Pyrroles. 111

Kubisch, J.
Chemoenzymatic Preparation of Oligoglycosides of Silybin, the Flavonolignan from *Silybum marianum*. 901

Kubo, Hajime.
Photosubstitution Reaction of Cyanoaromatics with Aliphatic Amides. 1027

Kubo, Kanji.
1,3-Dipolar Cycloadditions of 3-Bromo-1,5- and 3-Bromo-1,7-azulenequinones with Diazomethane, Diphenylnitrilimine, and Benzonitrile Oxide. 291

Kubo, Kanji.
Synthesis and Mercurophilic Properties of Acyclic and Thiolariat Ethers Having a Tropone Pendant. 351

Kudo, Masao.
An Efficient Preparation of 2*H*-Cyclohepta[*b*]furan-2-ones. 679

Kumadaki, Itsumaro.
Synthesis of α-(Trifluoromethyl)pyrrolidines by Cyclization of *N*-Tosyl-α-(trifluoromethyl)homoallylamine Derivatives. 589

Kumazawa, Keita.
Formation of Trisubstituted γ-Butyrolactones by Novel Ring Transformation of 2-Isoxazoline-2-oxides. 1033

Kuramoto, Shin-ya.
Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

Kurasawa, Yoshihisa.
Quinolone Analogues 3. Synthesis of 1,3-Dialkyl-4-oxo-1,4-dihydropyridazino[3,4-*b*]quinoxalines. 359

Kurebayashi, Hirotaka.
Intramolecular Complex Formation between Flexible Molecular Tweezers and Weak Electron Acceptor. 849

Kurihara, Teruo.
Syntheses and Properties of Tetraazaazulenocoronands and Octaazaazulenocryptand. 87

Kuroboshi, Manabu.
Substitution *vs.* Addition. Regioselective Electrobromination of Benzofuran. 825

Kuroda, Shigeyasu.
Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

Kurosawa, Kazu.
Convenient Construction of Hexahydrobenzo[*b*]furan Skeleton Containing Heteroatoms. Choice of Mn(III)- and Ce(IV)-based Radical Cyclization. 171

Kusumi, Takenori.
Carbon-13 Spin-Lattice Relaxation Time (T_1) for Assignment of Brominated Carbons. 577

Kuwatani, Yoshiyuki.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Kyogoku, Mayumi.
Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

L

Lanter, James C.
Resolution and Absolute Configurational Assignments to 1-Oxa- and 1-Thia-6-ketospiro[4.4]nonanyl Platforms. 49

Lattanzi, Roberta.
Synthesis and Pharmacological Evaluation of 18,19-Dehydrobuprenorphine. 989

Li, Ka.
Intramolecular Photocycloaddition of 2-Cycloalkenyl-1,3-dioxin-4-one. Stereoselective Synthesis of *cis*-Eudesmane-4,11-diols. 765

Li, Yanzhong.
Preparation of Benzoheterocycles Containing Group 14 Elements Using Zirconacyclopentadienes. 943

Liao, Chun-Chen.

Photochemistry of Pyrazino- and Quinoxalino-fused Naphthobarrelenes. 61

Linden, Anthony.
Synthesis of 1,3-Thiazolidines from Aromatic Thioketones and *N*-Benzylidene α-Amino Acid Esters *via* 1,3-Dipolar Cycloaddition of Azomethine Ylides. 691

M

Maeda, Kenji.
Convergent Strategy for Synthesizing Polycyclic Ether Marine Toxins: Synthesis of the ABCDE Ring Fragment of Ciguatoxin CTX3C. 93

Maeda, Yutaka.
Photoinduced Electron-Transfer Reactions between C_{60} and Cyclic Disiliranes (c-R_2Si-X-SiR_2; X=SiR_2, CH_2, O, NPh, S). 777

Mąkosza, Mieczysław.
Nucleophilic Aromatic Substitution of Hydrogen as a Tool for the Synthesis of Indole and Quinoline Derivatives. 445

Mamouni, Aïcha.
Azepine and [1,3]Oxazepine Fused Ring Construction through a Cationic Cyclization: An *N*-Acyliminium Ion Trapping of an Oxygen Atom or Olefin. 275

Mandai, Tadakatsu.
Synthesis and Biological Evaluation of Water Soluble Taxoids Bearing Sugar Moieties. 561

Marchalin, Stefan.
Azepine and [1,3]Oxazepine Fused Ring Construction through a Cationic Cyclization: An *N*-Acyliminium Ion Trapping of an Oxygen Atom or Olefin. 275

Marchand, Alan P.
Synthesis and Alkali Metal Picrate Extraction Studies of an Unusual Cage-functionalized Cryptand. 151

Maruoka, Keiji.
Facile Conversion of Trialkylsilyl Esters to Alkyl Esters Mediated by Tetrabutylammonium Fluoride Trihydrate. 593

Maruyama, Megumi.
Convergent Strategy for Synthesizing Polycyclic Ether Marine Toxins: Synthesis of the ABCDE Ring Fragment of Ciguatoxin CTX3C. 93

Matsubara, Jun.
An Efficient Synthesis of Optical Isomers of Vasopressin V_2 Receptor Antagonist OPC-41061 by Lipase-catalyzed Enantioselective Transesterification. 131

Matsuda, Hisashi.
Chemical Constituents of Two Oriental Orchids, *Calanthe discolor* and *C. liukiuensis*: Precursor Indole Glycoside of Tryptanthrin and Indirubin. 957

Matsuda, Noriko.
Preparation of Azulenequinones Containing Azacrown Moieties and the Singular Complexation of Sodium or Potassium Cation by 3,5-Bis(aza-18-crown-6)-1,7-azulenequinone in Solution. 439

Matsumoto, Kiyoshi.
1,3-Dipolar Cycloaddition of 1-Phenylpropa-1,2-diene with Pyridinium Dicyanomethylides: 1-Phenylpropa-1,2-diene as a Synthetic Equivalent of 1-Phenylpropyne. 611

Matsumoto, Koichiro.
Chiral Ketone-catalyzed Asymmetric Epoxidation of Stilbene with Oxone®. 615

Matsumura, Koji.
Synthesis of Brevicompanines, Plant Growth Regulators. 727

Matsuyama, Haruo.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Mihara, Jun.
Lewis Acid Catalysis of Second-Generation Metallosalen Complexes: An Explanation for Stereochemistry of Asymmetric Hetero Diels-Alder Reaction. 395

Mikami, Koichi.
Diastereocontrol in the Reaction of (*R*)- 2,2-Dimethyl-4-acyl-1,3-dioxolanes with Alkylmetals: A Facile Entry to Enantiopure Terpenetriols. 585

Mikata, Yuji.
Synthesis, Structure and Spectroscopic Characteristics of 2'-Boryl-4"-dimethylaminochalcones. Effect of an Intramolecular Boron-Oxygen Coordinate Bond to the Conjugated System. 929

Mikoshiba, Hisashi.
Diastereocontrol in the Reaction of (*R*)- 2,2-Dimethyl-4-acyl-1,3-dioxolanes with Alkylmetals: A Facile Entry to Enantiopure Terpenetriols. 585

Mikuni, Katsuhiko.
Synthesis and Biological Evaluation of Water Soluble Taxoids Bearing Sugar Moieties. 561

Minami, Hiroyuki.
Total Syntheses of Plagiochins A and D, Macrocyclic Bis(bibenzyls), by Pd(0) Catalyzed Intramolecular Stille-Kelly Reaction. 259

Mitchell, Reginald H.
[2_2]Metacyclophanedienes with Furan Bridges. 249

Miyashita, Masaaki.
Short-Step Synthesis of Some Santanolides, Dehydroisoerivanin, Isoerivanin, Ludovicin C, and 1α,3α-Dihydroxyarbusculin B by the Use of the Organoselenium

Reduction Method of Epoxy Ketones. 865

Miyata, Fusae.
An Efficient and Expeditious Synthesis of a Novel 5*H*-Naphth[1',2':5,6][1,4]oxazino[2,3-*b*]quinoxalin-5-one and Its Unique Inhibitory Activity against a Panel of Human Cancer Cell Lines. 619

Miyatake, Ryuta.
Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

Miyawaki, Kazuhiro.
Synthesis of Indeno[1,2-*b*]phenanthrene-Type Heterocycles by Cycloaromatization of Acyclic Non-conjugated Benzotetraynes. 887

Miyazaki, Akira.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Mizukami, Yoshihiro.
Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

Mizuno, Masahiro.
Synthesis and Properties of Novel Medium-sized Heterocyclic Compounds Containing Two Sulfur Atoms in the Ring and Synthetic Approaches to Conjugated Cyclic Disulfonium Ylides. 139

Mizuta, Yutaka.
Studies on Pyrimidine-annulated Heterocycles: Synthesis and Function of Novel 9-Substituted Cyclohepta[*b*]-pyrimido[5,4-*d*]furan-8,10(9*H*)-diones. 601

Monden, Yoshiko.
Synthesis of *N*-Boc-3-amino-1,2-epoxy-4-phenylbutane from (3*S*)-Hydroxy-γ-butyrolactone by Means of the Hofmann Rearrangement. 77

Mori, Akira.
1,3-Dipolar Cycloadditions of 3-Bromo-1,5- and 3-Bromo-1,7-azulenequinones with Diazomethane, Diphenylnitrilimine, and Benzonitrile Oxide. 291

Mori, Akira.
Synthesis and Mercurophilic Properties of Acyclic and Thiolariat Ethers Having a Tropone Pendant. 351

Mori, Akira.
Intramolecular Photocycloaddition of 2-Cycloalkenyl-1,3-dioxin-4-one. Stereoselective Synthesis of *cis*-Eudesmane-4,11-diols. 765

Mori, Takashi.
Total Syntheses of Plagiochins A and D, Macrocyclic Bis(bibenzyls), by Pd(0) Catalyzed Intramolecular Stille-Kelly Reaction. 259

Morishita, Hiroshi.
Benzyloxymethyl Group as a Convertible Internal Ligand for La(OTf)$_3$-catalyzed 7-*endo* Ring-Openig of Hydroxy Epoxide. 109

Morita, Chikanori.
Synthesis of Alternariolide Analogs for Photoaffinity-Labeling. 917

Morita, Noboru.
Reaction of 2-Aminoazulenes with Aldehydes. One Pot Synthesis of Diazuleno[2,1-*b*:1,2-*e*]pyridines. 667

Morita, Noboru.
An Efficient Preparation of 2*H*-Cyclohepta[*b*]furan-2-ones. 679

Morita, Seiji.
An Efficient Synthesis of Optical Isomers of Vasopressin V_2 Receptor Antagonist OPC-41061 by Lipase-catalyzed Enantioselective Transesterification. 131

Moriya, Tomokazu.
Synthesis, Structure and Spectroscopic Characteristics of 2'-Boryl-4"-dimethylaminochalcones. Effect of an Intramolecular Boron-Oxygen Coordinate Bond to the Conjugated System. 929

Murafuji, Toshihiro.
Synthesis, Structure and Spectroscopic Characteristics of 2'-Boryl-4"-dimethylaminochalcones. Effect of an Intramolecular Boron-Oxygen Coordinate Bond to the Conjugated System. 929

Murai, Akio.
Benzyloxymethyl Group as a Convertible Internal Ligand for La(OTf)$_3$-catalyzed 7-*endo* Ring-Openig of Hydroxy Epoxide. 109

Murakami, Masahiro.
Synthesis of *N*-Boc-3-amino-1,2-epoxy-4-phenylbutane from (3*S*)-Hydroxy-γ-butyrolactone by Means of the Hofmann Rearrangement. 77

Murakami, Satoshi.
Bis(ethylenethio)tetraselenafulvalene and Related Hybrid Diselenadithiafulvalenes as Novel Electron Donors Forming Highly Conductive Complexes with 7,7,8,8-Tetracyanoquinodimethane. 225

Murakami, Toshiyuki.
Chemical Constituents of Two Oriental Orchids, *Calanthe discolor* and *C. liukiuensis*: Precursor Indole Glycoside of Tryptanthrin and Indirubin. 957

Murashima, Takashi.
Preparation of Meso-unsubstituted Porphyrins Substituted with Mono- and Tetraformyl and Other Electron-withdrawing Groups. 705

Murata, Kiyoshi.
Quinoline Alkaloids of *Orixa japonica*. 1139

Murata, Shizuaki.
A Convenient Determination of Chiral Pteridines; Applica-

tion of Fluorescence Detected Circular Dichroism (FDCD) to the Major Pterin from *Escherichia coli*. 283

N

Nabeshima, Maki.
Reductive Cyclization of 8-(2-Nitrophenyl)-1-azaazulene Derivatives; Formation of 6a,7-Diazanaphth[3,2,1-*cd*]-azulene and 7*H*-1,7-Diazaindeno[1,2-*e*]azulene Systems, a New DNA Intercalater. 329

Nagao, Yukinori.
Synthesis and Properties of Benzimidazole and Naphthoimidazole Derivatives of Perylenedicarboximide. 757

Nagase, Shigeru.
Photoinduced Electron-Transfer Reactions between C_{60} and Cyclic Disiliranes (c-R_2Si-X-SiR_2; X=SiR_2, CH_2, O, NPh, S). 777

Nagashima, Fumihiro.
Sesquiterpene Lactones and Acetogenin Lactones from the Hepaticae and Chemosystematics of the Liverworts *Frullania*, *Plagiochila* and *Porella*. 1057

Nagatsu, Toshiharu.
A Convenient Determination of Chiral Pteridines; Application of Fluorescence Detected Circular Dichroism (FDCD) to the Major Pterin from *Escherichia coli*. 283

Nakadaira, Yasuhiro.
Photoinduced Electron-Transfer Reactions between C_{60} and Cyclic Disiliranes (c-R_2Si-X-SiR_2; X=SiR_2, CH_2, O, NPh, S). 777

Nakagawa, Kazuya.
Synthesis of *N*-Boc-3-amino-1,2-epoxy-4-phenylbutane from (3*S*)-Hydroxy-γ-butyrolactone by Means of the Hofmann Rearrangement. 77

Nakai, Takeshi.
Diastereocontrol in the Reaction of (*R*)- 2,2-Dimethyl-4-acyl-1,3-dioxolanes with Alkylmetals: A Facile Entry to Enantiopure Terpenetriols. 585

Nakajima, Makoto.
Enantiocontrol in Tandem Allylic Sulfonium Ylide Generation and [2,3] Sigmatropic Rearrangement Catalyzed by Chiral Dirhodium(II) Complexes. 623

Nakamura, Kosho.
Synthesis and Biological Evaluation of Water Soluble Taxoids Bearing Sugar Moieties. 561

Nakanishi, Katsuyoshi.
Synthesis and Biological Evaluation of Water Soluble Taxoids Bearing Sugar Moieties. 561

Nakanishi, Koji.
Preface. 3

Nakano, Hiroto.
Synthesis of New Chiral Catalysts, 2-Azanorbornyloxazolidines, for Enantioselective Addition of Diethylzinc to Aldehydes. 411

Nakano, Yûko.
Regioselective Synthesis of Bridged Azabicyclic Compounds Using Radical Translocation/Cyclization Reactions of 4-Alkynyl-1-(*o*-iodobenzoyl)piperidines. 747

Nakashiba, Yasuyo.
Samarium(II) Iodide-mediated Intramolecular Aldol-Type Cyclization. 101

Nakashima, Katsuyuki.
Samarium(II) Iodide-mediated Intramolecular Aldol-Type Cyclization. 101

Nebois, Pascal.
Cycloadditions of α,β-Unsaturated *N,N*-Dimethylhydrazones. A Diels-Alder Strategy for the Building of Aza-Hetero Rings. 1095

Negri, Lucia.
Synthesis and Pharmacological Evaluation of 18,19-Dehydrobuprenorphine. 989

Nemoto, Hisao.
Acid-catalyzed Cycloaromatization of Enediyne Model Compounds *via* Enyne-Allene Intermediates. 571

Nishijima, Ken-ichi.
Photochemical Synthesis and Characterization of the Tautomers of 1,3,5,7,9- and 1,3,6,8,10-Pentamethylcyclooctapyrimidine-2,4-diones. 65

Nishijo, Jun-ichi.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Nishikawa, Hiroyuki.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Nishikawa, Teruhiko.
Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

Nishimura, Jun.
Synthesis of Pyridinocrownophanes Exhibiting High Ag^+-Affinity. 123

Nishino, Hiroshi.
Convenient Construction of Hexahydrobenzo[*b*]furan Skeleton Containing Heteroatoms. Choice of Mn(III)- and Ce(IV)-based Radical Cyclization. 171

Nishio, Takehiko.
Thionation of *N*-Acylthreonine and Its Methyl Ester with Lawesson's Reagent: Synthesis of 5-Oxazolones, 5-Thiazolones and Thiazolines. 201

Nishioka, Toshiko.

Concise Synthesis of (3*R*,4*S*)-3-Hydroxy-4-methyl-γ-butyrolactone. 69

Nishita, Yoshitaka.
Revision of the Structure of a New Coumarin Isolated from *Artemisia carviforia* Wall. 319

Nishiyama, Takashi.
Concise Synthesis of (3*R*,4*S*)-3-Hydroxy-4-methyl-γ-butyrolactone. 69

Nishizawa, Mugio.
Intramolecular Oxymercuration of 4-Hexen-1-ols: Kinetic *vs.* Thermodynamic Products Regulated by Mercuric Salts. 629

Nitta, Makoto.
Studies on Pyrimidine-annulated Heterocycles: Synthesis and Function of Novel 9-Substituted Cyclohepta[*b*]-pyrimido[5,4-*d*]furan-8,10(9*H*)-diones. 601

N'Krumah, Stephen.
3-Aza[5]metacyclophanes: Synthesis and Reactions. 799

Noma, Yoshiaki.
Biotransformation of Terpenoids from the Crude Drugs and Animal Origin by Microorganisms. 529

Nomura, Akihiko.
Application of Phthalimidine Synthesis with Use of 1,2,3-1*H*-Benzotriazole and 2-Mercaptoethanol as Dual Synthetic Auxiliaries. 2. Effective Synthesis of Phthalimidines Possessing Bulky Group at 2-Position. 635

Nomura, Takahide.
A Convenient Determination of Chiral Pteridines; Application of Fluorescence Detected Circular Dichroism (FDCD) to the Major Pterin from *Escherichia coli*. 283

Nomura, Taro.
Structure of Sanggenon O, a Diels-Alder Type Adduct Derived from a Chalcone and a Dehydroprenylated Sanggenon-Type Flavanone from *Morus cathayana*. 639

Noshita, Toshiro.
Quinoline Alkaloids of *Orixa japonica*. 1139

Nozoe, Tetsuo.
Syntheses and Properties of Tetraazaazulenocoronands and Octaazaazulenocryptand. 87

Nozoe, Tetsuo.
1,3-Dipolar Cycloadditions of 3-Bromo-1,5- and 3-Bromo-1,7-azulenequinones with Diazomethane, Diphenylnitrilimine, and Benzonitrile Oxide. 291

O

Oda, Mitsunori.
Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

Oelgemöller, Michael.
Synthesis of a Macroheterocyclic Compound through Photodecarboxylation of Potassium ω-Phthalimidoalkynoate. 1049

Ogasawara, Kunio.
Cascading Single-Step Stereoselective Construction of the α-Alloyohimbine Framework: A New Synthesis of (-)-Nitraraine. 43

Ogura, Eiji.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Ogura, Miharu.
Quinolone Analogues 3. Synthesis of 1,3-Dialkyl-4-oxo-1,4-dihydropyridazino[3,4-*b*]quinoxalines. 359

Oguri, Hiroki.
Convergent Strategy for Synthesizing Polycyclic Ether Marine Toxins: Synthesis of the ABCDE Ring Fragment of Ciguatoxin CTX3C. 93

Ohkita, Masakazu.
Generation and Amphoteric Redox Properties of Novel Neutral Radicals with the TTF-TCNQ Hybrid Structure. 387

Ohkura, Kazue.
Photochemical Synthesis and Characterization of the Tautomers of 1,3,5,7,9- and 1,3,6,8,10-Pentamethylcyclooctapyrimidine-2,4-diones. 65

Ohmiya, Shigeru.
Photosubstitution Reaction of Cyanoaromatics with Aliphatic Amides. 1027

Ohshima, Shinichi.
Quinolone Analogues 3. Synthesis of 1,3-Dialkyl-4-oxo-1,4-dihydropyridazino[3,4-*b*]quinoxalines. 359

Ohta, Akira.
Preparation, Structure, and Properties of 1,3-Bis(1,4-dithiafulven-6-yl)azulenes. 377

Ohta, Toshiharu.
Syntheses of Wasabi Phytoalexin (Methyl 1-Methoxyindole-3-carboxylate) and Its 5-Iodo Derivative, and Their Nucleophilic Substitution Reactions. 425

Ohtani, Shinji.
5-*endo-trig* Radical Cyclization of *N*- Benzyl-2-halo-*N*-(6-oxo-1-cyclohexen-1-yl)acetamides. 1021

Ohtani, Tadaaki.
An Efficient Synthesis of Optical Isomers of Vasopressin V_2 Receptor Antagonist OPC-41061 by Lipase-catalyzed Enantioselective Transesterification. 131

Oishi, Tohru.
Convergent Strategy for Synthesizing Polycyclic Ether

Marine Toxins: Synthesis of the ABCDE Ring Fragment of Ciguatoxin CTX3C. 93

Okada, Kyoko.
Thermolysis of Ethoxycarbonyl[2-phenyl-2-(phenylsulfonylhydrazono)ethyl]methylenetriphenylphosphoranes. Formation of Substituted Pyridazinones. 237

Okamoto, Kazuya.
Regioselective Synthesis of Bridged Azabicyclic Compounds Using Radical Translocation/Cyclization Reactions of 4-Alkynyl-1-(*o*-iodobenzoyl)piperidines. 747

Okamoto, Yoshihisa.
Quinolone Analogues 3. Synthesis of 1,3-Dialkyl-4-oxo-1,4-dihydropyridazino[3,4-*b*]quinoxalines. 359

Okubo, Hisae.
Enantiocontrol in Tandem Allylic Sulfonium Ylide Generation and [2,3] Sigmatropic Rearrangement Catalyzed by Chiral Dirhodium(II) Complexes. 623

Okujima, Tetsuo.
Reaction of 2-Aminoazulenes with Aldehydes. One Pot Synthesis of Diazuleno[2,1-*b*:1,2-*e*]pyridines. 667

Okumoto, Hiroshi.
Synthesis and Biological Evaluation of Water Soluble Taxoids Bearing Sugar Moieties. 561

Okuno, Toshikatsu.
Synthesis of Alternariolide Analogs for Photoaffinity-Labeling. 917

Okuyama, Yuko.
Synthesis of New Chiral Catalysts, 2-Azanorbornyloxazolidines, for Enantioselective Addition of Diethylzinc to Aldehydes. 411

Omote, Masaaki.
Synthesis of α-(Trifluoromethyl)pyrrolidines by Cyclization of *N*-Tosyl-α-(trifluoromethyl)homoallylamine Derivatives. 589

Ono, Noboru.
Preparation of Meso-unsubstituted Porphyrins Substituted with Mono- and Tetraformyl and Other Electron-withdrawing Groups. 705

Ooi, Takashi.
Carbon-13 Spin-Lattice Relaxation Time (T_1) for Assignment of Brominated Carbons. 577

Ooi, Takashi.
Facile Conversion of Trialkylsilyl Esters to Alkyl Esters Mediated by Tetrabutylammonium Fluoride Trihydrate. 593

Ori, Mayuko.
Thionation of *N*-Acylthreonine and Its Methyl Ester with Lawesson's Reagent: Synthesis of 5-Oxazolones, 5-Thiazolones and Thiazolines. 201

Orita, Hitomi.
Syntheses of Wasabi Phytoalexin (Methyl 1-Methoxyindole-3-carboxylate) and Its 5-Iodo Derivative, and Their Nucleophilic Substitution Reactions. 425

Oshitari, Tetsuta.
Synthesis and Biological Evaluation of Water Soluble Taxoids Bearing Sugar Moieties. 561

Otsubo, Kenji.
An Efficient Synthesis of Optical Isomers of Vasopressin V_2 Receptor Antagonist OPC-41061 by Lipase-catalyzed Enantioselective Transesterification. 131

Otsubo, Tetsuo.
Bis(ethylenethio)tetraselenafulvalene and Related Hybrid Diselenadithiafulvalenes as Novel Electron Donors Forming Highly Conductive Complexes with 7,7,8,8-Tetracyanoquinodimethane. 225

Owen, Dafydd R.
Resolution and Absolute Configurational Assignments to 1-Oxa- and 1-Thia-6-ketospiro[4.4]nonanyl Platforms. 49

P

Paquette, Leo A.
Resolution and Absolute Configurational Assignments to 1-Oxa- and 1-Thia-6-ketospiro[4.4]nonanyl Platforms. 49

Parrer, Ulrike.
Synthesis of Azanaphthoquinone Annelated Pyrroles. 111

Pautet, Félix.
Cycloadditions of α,β-Unsaturated *N,N*-Dimethylhydrazones. A Diels-Alder Strategy for the Building of Aza-Hetero Rings. 1095

Peddinti, Rama Krishna.
Photochemistry of Pyrazino- and Quinoxalino-fused Naphthobarrelenes. 61

Pichler, Andrea.
Synthesis of Azanaphthoquinone Annelated Pyrroles. 111

Polanc, Slovenko.
4-Acylhydrazinomethylene-2-phenyloxazol-5(4*H*)-ones as Acylating Agents: Synthesis of Salicylanilides and 1,2,4-Triazolo[4,3-*b*]pyridazines. 1011

Požgan, Franc.
4-Acylhydrazinomethylene-2-phenyloxazol-5(4*H*)-ones as Acylating Agents: Synthesis of Salicylanilides and 1,2,4-Triazolo[4,3-*b*]pyridazines. 1011

R

Ren, Jianwei.
The Identification, Mechanism, and Improved Synthesis of a New and Unique Heterocyclic System with a Fused Imidazole Ring. 721
Ryu, Hyung-Chul.
Palladium-catalyzed Carbonylative Coupling of Hypervalent Iodonium Salts with Amidoximes: Synthesis of Oxadiazoles. 985

S

Saeeng, Rungnapha.
Synthesis of Ciguatoxin (2*S*,5*R*)-ABC Segment. 789
Saito, Katsuhiro.
Photochemistry of Heterocyclic Cage Compound: Photoreaction of 2,7-Dihydroazepine to Give 2,3-Dihydroazepine and Photoreaction of the 2,3-Dihydroazepine to Form 1,2-Dihydroaniline. 567
Saito, Tatsuru.
Triphosgene: A Versatile Reagent for Bisehler-Napieralski Reaction. 437
Saitoh, Toshiaki.
Synthesis of 2,3,4,5-Tetrahydro-1*H*-2-benzazepines *via* Pummerer-Type Cyclization of *N*-Arylmethyl-*N*-(3-phenylsulfinylpropyl)formamides. 967
Sakagami, Hideki.
Cascading Single-Step Stereoselective Construction of the α-Alloyohimbine Framework: A New Synthesis of (-)-Nitraraine. 43
Sakagami, Youji.
Synthesis of 2,5-Disubstituted Tetrahydrofurans Catalyzed by Palladium(0). 419
Sakai, Jun-ichi.
Two Taxoids from *Taxus cuspidata* as Modulators of Multidrag Resistant Tumor Cells. 999
Sakakibara, Masahiro.
Intramolecular Oxymercuration of 4-Hexen-1-ols: Kinetic *vs.* Thermodynamic Products Regulated by Mercuric Salts. 629
Sakurama, Tetsuo.
Chemical Constituents of Two Oriental Orchids, *Calanthe discolor* and *C. liukiuensis*: Precursor Indole Glycoside of Tryptanthrin and Indirubin. 957
Sakushima, Akiyo.
Photochemical Synthesis and Characterization of the Tautomers of 1,3,5,7,9- and 1,3,6,8,10-Pentamethylcyclooctapyrimidine-2,4-diones. 65
Sano, Takehiro.
Synthesis of 2,3,4,5-Tetrahydro-1*H*-2-benzazepines *via* Pummerer-Type Cyclization of *N*-Arylmethyl-*N*-(3-phenylsulfinylpropyl)formamides. 967
Sasaki, Akira.
The Structural Aspects of Carbapenem Antibiotics. 497
Sasaki, Hirofumi.
Two Taxoids from *Taxus cuspidata* as Modulators of Multidrag Resistant Tumor Cells. 999
Sasaki, Kuniaki.
Formation of Trisubstituted γ-Butyrolactones by Novel Ring Transformation of 2-Isoxazoline-2-oxides. 1033
Sasaki, Yoshiko.
Photoinduced Electron-Transfer Reactions between C_{60} and Cyclic Disiliranes (c-R_2Si-X-SiR_2; X=SiR_2, CH_2, O, NPh, S). 777
Sato, Kazuyuki.
Synthesis of α-(Trifluoromethyl)pyrrolidines by Cyclization of *N*-Tosyl-α-(trifluoromethyl)homoallylamine Derivatives. 589
Sato, Masashi.
A Practical Route to Quinolines from Anilines. 105
Sato, Ohki.
Preparation of Azulenequinones Containing Azacrown Moieties and the Singular Complexation of Sodium or Potassium Cation by 3,5-Bis(aza-18-crown-6)-1,7-azulenequinone in Solution. 439
Sato, Tatsunori.
Regioselective Synthesis of Bridged Azabicyclic Compounds Using Radical Translocation/Cyclization Reactions of 4-Alkynyl-1-(*o*-iodobenzoyl)piperidines. 747
Sato, Tatsunori.
5-*endo-trig* Radical Cyclization of *N*- Benzyl-2-halo-*N*-(6-oxo-1-cyclohexen-1-yl)acetamides. 1021
Sato, Tsuguo.
Solvent Effects on Relative Stability of Meridine and Its Tautomer: MO Calculations. 55
Schmidhammer, Helmut.
Synthesis and Pharmacological Evaluation of 18,19-Dehydrobuprenorphine. 989
Schütz, Johannes.
Synthesis and Pharmacological Evaluation of 18,19-Dehydrobuprenorphine. 989
Sedmera, P.
Chemoenzymatic Preparation of Oligoglycosides of Silybin, the Flavonolignan from *Silybum marianum*. 901
Seki, Koh-ichi.
Photochemical Synthesis and Characterization of the Tautomers of 1,3,5,7,9- and 1,3,6,8,10-Pentamethylcyclooctapyrimidine-2,4-diones. 65
Seto, Hideharu.
Efficient and Stereoselective β-Epoxidation of the 16(17)-Double Bond of Gibberellic Acid Derivatives with an Acylperoxy Radical Generated by Irradiation of α-Diketones

and Oxygen. 81

Shaheen, Sha. I.
Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

Shi, Ya-Qin.
Structure of Sanggenon O, a Diels-Alder Type Adduct Derived from a Chalcone and a Dehydroprenylated Sanggenon-Type Flavanone from *Morus cathayana*. 639

Shibazaki, Ikuko.
Thermolysis of Ethoxycarbonyl[2-phenyl-2-(phenylsulfonylhydrazono)ethyl]methylenetriphenylphosphoranes. Formation of Substituted Pyridazinones. 237

Shibuya, Masayuki.
Acid-catalyzed Cycloaromatization of Enediyne Model Compounds *via* Enyne-Allene Intermediates. 571

Shigenaga, Akira.
Acid-catalyzed Cycloaromatization of Enediyne Model Compounds *via* Enyne-Allene Intermediates. 571

Shim, Sang Chul.
Synthesis of a Macroheterocyclic Compound through Photodecarboxylation of Potassium ω-Phthalimidoalkynoate. 1049

Shimizu, Hiroshi.
Synthesis and Properties of Novel Medium-sized Heterocyclic Compounds Containing Two Sulfur Atoms in the Ring and Synthetic Approaches to Conjugated Cyclic Disulfonium Ylides. 139

Shimizu, Takeshi.
Efficient and Stereoselective β-Epoxidation of the 16(17)-Double Bond of Gibberellic Acid Derivatives with an Acylperoxy Radical Generated by Irradiation of α-Diketones and Oxygen. 81

Shimono, Satoshi.
Synthesis of α,α'-Asymmetric Nitroxide Radicals by *C*- or *O*-Acylation of Radical-Enolate Intermediates Generated by Reduction of Homoallylic Nitro Enones with Samarium (II) Iodide. 217

Shindo, Mitsuru.
Synthetic Studies on Halichlorine and Pinnaic Acid: Palladium-mediated Construction of the Bicyclic Spiro Core. 871

Shiori, Takayuki.
Cycloaddition Reactions of Trimethylsilylketene with 8-Azaheptafulvenes and 6-Amino-1-azafulvenes. 209

Shirahama, Haruhisa.
Synthesis of Alternariolide Analogs for Photoaffinity-Labeling. 917

Shirahata, Yoshie.
Preparation of β-Substituted γ-Keto Esters by the Grignard Reaction on *N*-Acylpyrazoles. 309

Shishido, Kozo.
Synthetic Studies on Halichlorine and Pinnaic Acid: Palladium-mediated Construction of the Bicyclic Spiro Core. 871

Šimánek, Vilím.
Chemoenzymatic Preparation of Oligoglycosides of Silybin, the Flavonolignan from *Silybum marianum*. 901

Škottová, N.
Chemoenzymatic Preparation of Oligoglycosides of Silybin, the Flavonolignan from *Silybum marianum*. 901

Slanz, Rita.
Synthesis of Azanaphthoquinone Annelated Pyrroles. 111

Somei, Masanori.
Syntheses of Wasabi Phytoalexin (Methyl 1-Methoxyindole-3-carboxylate) and Its 5-Iodo Derivative, and Their Nucleophilic Substitution Reactions. 425

Sono, Masakazu.
Samarium(II) Iodide-mediated Intramolecular Aldol-Type Cyclization. 101

Spek, Anthony L.
3-Aza[5]metacyclophanes: Synthesis and Reactions. 799

Spreitzer, Helmut.
Synthesis of Azanaphthoquinone Annelated Pyrroles. 111

Suenaga, Kiyotake.
Haterumaimides A-E, Five New Dichlorolissoclimide-Type Diterpenoids from an Ascidian, *Lissoclinum* Sp. 1039

Suenaga, Toshiro.
Efficient and Stereoselective β-Epoxidation of the 16(17)-Double Bond of Gibberellic Acid Derivatives with an Acylperoxy Radical Generated by Irradiation of α-Diketones and Oxygen. 81

Suga, Hiroyuki.
Preparation of New Nitrogen-bridged Heterocycles. 50. Syntheses of Some Heterocyclic Compounds Starting from Pyridinium 1-(Ethoxycarbonylacetyl)methylides. 185

Sugihara, Takumichi.
Intramolecular Oxymercuration of 4-Hexen-1-ols: Kinetic *vs.* Thermodynamic Products Regulated by Mercuric Salts. 629

Sugihara, Yoshikazu.
Synthesis, Structure and Spectroscopic Characteristics of 2'-Boryl-4"-dimethylaminochalcones. Effect of an Intramolecular Boron-Oxygen Coordinate Bond to the Conjugated System. 929

Sugimoto, Hayato.

Facile Conversion of Trialkylsilyl Esters to Alkyl Esters Mediated by Tetrabutylammonium Fluoride Trihydrate. 593

Sugimoto, Kenji.
Synthesis, Structure and Spectroscopic Characteristics of 2'-Boryl-4"-dimethylaminochalcones. Effect of an Intramolecular Boron-Oxygen Coordinate Bond to the Conjugated System. 929

Sugimoto, Takashi.
A Convenient Determination of Chiral Pteridines; Application of Fluorescence Detected Circular Dichroism (FDCD) to the Major Pterin from *Escherichia coli*. 283

Sunagawa, Makoto.
The Structural Aspects of Carbapenem Antibiotics. 497

Suzuki, Hironori.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Suzuki, Ichiro.
Acid-catalyzed Cycloaromatization of Enediyne Model Compounds *via* Enyne-Allene Intermediates. 571

Suzuki, Takanori.
Generation and Amphoteric Redox Properties of Novel Neutral Radicals with the TTF-TCNQ Hybrid Structure. 387

Suzuki, Toshio.
Short-Step Synthesis of Some Santanolides, Dehydroisoerivanin, Isoerivanin, Ludovicin C, and 1α,3α-Dihydroxyarbusculin B by the Use of the Organoselenium Reduction Method of Epoxy Ketones. 865

Szieber, Petra.
Synthesis of Azanaphthoquinone Annelated Pyrroles. 111

T

Tabusa, Fujio.
An Efficient Synthesis of Optical Isomers of Vasopressin V_2 Receptor Antagonist OPC-41061 by Lipase-catalyzed Enantioselective Transesterification. 131

Takagi, Tomoko.
Stereospecific Substitution of 1-(2-Pyridinyl)ethyl Methanesulfonate with *S*- and *O*-Nucleophiles. 735

Takahashi, Hironobu.
Total Syntheses of Plagiochins A and D, Macrocyclic Bis(bibenzyls), by Pd(0) Catalyzed Intramolecular Stille-Kelly Reaction. 259

Takahashi, Ichiro.
Application of Phthalimidine Synthesis with Use of 1,2,3-1*H*-Benzotriazole and 2-Mercaptoethanol as Dual Synthetic Auxiliaries. 2. Effective Synthesis of Phthalimidines Possessing Bulky Group at 2-Position. 635

Takahashi, Kazuya.
Intramolecular Oxymercuration of 4-Hexen-1-ols: Kinetic *vs.* Thermodynamic Products Regulated by Mercuric Salts. 629

Takahashi, Tamotsu.
Preparation of Benzoheterocycles Containing Group 14 Elements Using Zirconacyclopentadienes. 943

Takano, Jun-ichi.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Takano, Takahiro.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Takao, Hiroko.
Intramolecular Oxymercuration of 4-Hexen-1-ols: Kinetic *vs.* Thermodynamic Products Regulated by Mercuric Salts. 629

Takaoka, Kiyo.
Cycloaddition Reactions of Trimethylsilylketene with 8-Azaheptafulvenes and 6-Amino-1-azafulvenes. 209

Takaoka, Shigeru.
Samarium(II) Iodide-mediated Intramolecular Aldol-Type Cyclization. 101

Takasu, Kiyosei.
Synthesis of a Novel Artemisinin Analogue Having Potent Antimalarial Activity. 607

Takayasu, Tohru.
Studies on Pyrimidine-annulated Heterocycles: Synthesis and Function of Novel 9-Substituted Cyclohepta[*b*]-pyrimido[5,4-*d*]furan-8,10(9*H*)-diones. 601

Takeda, Koji.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Takeshita, Hitoshi.
1,3-Dipolar Cycloadditions of 3-Bromo-1,5- and 3-Bromo-1,7-azulenequinones with Diazomethane, Diphenylnitrilimine, and Benzonitrile Oxide. 291

Takeshita, Hitoshi.
Intramolecular Photocycloaddition of 2-Cycloalkenyl-1,3-dioxin-4-one. Stereoselective Synthesis of *cis*-Eudesmane-4,11-diols. 765

Takeuchi, Yasuo.
Revision of the Structure of a New Coumarin Isolated from *Artemisia carviforia* Wall. 319

Takhi, Mohamed.
Synthesis and Alkali Metal Picrate Extraction Studies of an Unusual Cage-functionalized Cryptand. 151

Takimiya, Kazuo.
Bis(ethylenethio)tetraselenafulvalene and Related Hybrid Diselenadithiafulvalenes as Novel Electron Donors Forming Highly Conductive Complexes with 7,7,8,8-

Tetracyanoquinodimethane. 225

Tamura, Rui.

Synthesis of α,α'-Asymmetric Nitroxide Radicals by *C*- or *O*-Acylation of Radical-Enolate Intermediates Generated by Reduction of Homoallylic Nitro Enones with Samarium (II) Iodide. 217

Tamura, Takanori.

Application of Phthalimidine Synthesis with Use of 1,2,3-1*H*-Benzotriazole and 2-Mercaptoethanol as Dual Synthetic Auxiliaries. 2. Effective Synthesis of Phthalimidines Possessing Bulky Group at 2-Position. 635

Tanaka, Hideo.

Substitution *vs.* Addition. Regioselective Electrobromination of Benzofuran. 825

Tanaka, Koichi.

Optical Resolution of 2-Azabicyclo[2.2.1]hept-5-en-3-one by Inclusion Complexation with Brucine. 405

Tanaka, Motohiro.

Application of Phthalimidine Synthesis with Use of 1,2,3-1*H*-Benzotriazole and 2-Mercaptoethanol as Dual Synthetic Auxiliaries. 2. Effective Synthesis of Phthalimidines Possessing Bulky Group at 2-Position. 635

Tanaka, Naoki.

1,3-Dipolar Cycloaddition of 1-Phenylpropa-1,2-diene with Pyridinium Dicyanomethylides: 1-Phenylpropa-1,2-diene as a Synthetic Equivalent of 1-Phenylpropyne. 611

Tanaka, Yuko.

Synthesis of a Novel Artemisinin Analogue Having Potent Antimalarial Activity. 607

Tanimoto, Asuka.

Syntheses of Wasabi Phytoalexin (Methyl 1-Methoxyindole-3-carboxylate) and Its 5-Iodo Derivative, and Their Nucleophilic Substitution Reactions. 425

Tarumoto, Naohiro.

Diastereoselective Addition of Organometallic Reagents to (*R*)-2,3-Isopropylidenedioxy-1-(2-furyl)-1-propanone Yielding Chiral Tertiary Furyl Carbinols. 341

Tazawa, Masahiro.

A Convenient Determination of Chiral Pteridines; Application of Fluorescence Detected Circular Dichroism (FDCD) to the Major Pterin from *Escherichia coli*. 283

Terakado, Sachiko.

Synthesis of 2,3,4,5-Tetrahydro-1*H*-2-benzazepines *via* Pummerer-Type Cyclization of *N*-Arylmethyl-*N*-(3-phenylsulfinylpropyl)formamides. 967

Terazono, Tomomi.

Reaction of 2-Aminoazulenes with Aldehydes. One Pot Synthesis of Diazuleno[2,1-*b*:1,2-*e*]pyridines. 667

Toda, Fumio.

Optical Resolution of 2-Azabicyclo[2.2.1]hept-5-en-3-one by Inclusion Complexation with Brucine. 405

Toda, Jun.

Synthesis of 2,3,4,5-Tetrahydro-1*H*-2-benzazepines *via* Pummerer-Type Cyclization of *N*-Arylmethyl-*N*-(3-phenylsulfinylpropyl)formamides. 967

Tokiwano, Tetsuo.

Benzyloxymethyl Group as a Convertible Internal Ligand for La(OTf)$_3$-catalyzed 7-*endo* Ring-Openig of Hydroxy Epoxide. 109

Tokuyama, Hidetoshi.

A Practical Route to Quinolines from Anilines. 105

Tomida, Akihiro.

Two Taxoids from *Taxus cuspidata* as Modulators of Multidrag Resistant Tumor Cells. 999

Tomioka, Kiyoshi.

Chiral Ketone-catalyzed Asymmetric Epoxidation of Stilbene with Oxone®. 615

Tori, Motoo.

Samarium(II) Iodide-mediated Intramolecular Aldol-Type Cyclization. 101

Torii, Shigeru.

Substitution *vs.* Addition. Regioselective Electrobromination of Benzofuran. 825

Toyota, Masahiro.

Synthesis of a Novel Artemisinin Analogue Having Potent Antimalarial Activity. 607

Toyota, Masao.

Sesquiterpene Lactones and Acetogenin Lactones from the Hepaticae and Chemosystematics of the Liverworts *Frullania*, *Plagiochila* and *Porella*. 1057

Tsai, Fu-Yu.

Preparation of Benzoheterocycles Containing Group 14 Elements Using Zirconacyclopentadienes. 943

Tsubuki, Masayoshi.

Diastereoselective Addition of Organometallic Reagents to (*R*)-2,3-Isopropylidenedioxy-1-(2-furyl)-1-propanone Yielding Chiral Tertiary Furyl Carbinols. 341

Tsuchiya, Yoshinori.

Synthesis and Biological Evaluation of Water Soluble Taxoids Bearing Sugar Moieties. 561

Tsuda, Koji.

Synthesis and Properties of Benzimidazole and Naphthoimidazole Derivatives of Perylenedicarboximide. 757

Tsuji, Moriya.

Photosubstitution Reaction of Cyanoaromatics with Aliphatic Amides. 1027

Tsuji, Takashi.

Generation and Amphoteric Redox Properties of Novel Neutral Radicals with the TTF-TCNQ Hybrid Structure. 387

Tsukamoto, Yoshihiro.

Preparation of β-Substituted γ-Keto Esters by the Grignard Reaction on *N*-Acylpyrazoles. 309

Tsunetsugu, Josuke.
Preparation of Azulenequinones Containing Azacrown Moieties and the Singular Complexation of Sodium or Potassium Cation by 3,5-Bis(aza-18-crown-6)-1,7-azulenequinone in Solution. 439

Tsuruo, Takashi.
Two Taxoids from *Taxus cuspidata* as Modulators of Multidrag Resistant Tumor Cells. 999

U

Uchida, Hiroyuki.
Application of Phthalimidine Synthesis with Use of 1,2,3-1*H*-Benzotriazole and 2-Mercaptoethanol as Dual Synthetic Auxiliaries. 2. Effective Synthesis of Phthalimidines Possessing Bulky Group at 2-Position. 635

Uchida, Minoru.
An Efficient Synthesis of Optical Isomers of Vasopressin V_2 Receptor Antagonist OPC-41061 by Lipase-catalyzed Enantioselective Transesterification. 131

Uchida, Takane.
1,3-Dipolar Cycloaddition of 1-Phenylpropa-1,2-diene with Pyridinium Dicyanomethylides: 1-Phenylpropa-1,2-diene as a Synthetic Equivalent of 1-Phenylpropyne. 611

Uchida, Tatsuya.
Lewis Acid Catalysis of Second-Generation Metallosalen Complexes: An Explanation for Stereochemistry of Asymmetric Hetero Diels-Alder Reaction. 395

Uchida, Tokiko.
Synthesis and Properties of Benzimidazole and Naphthoimidazole Derivatives of Perylenedicarboximide. 757

Uchiyama, Shun.
Photochemical Synthesis and Characterization of the Tautomers of 1,3,5,7,9- and 1,3,6,8,10-Pentamethylcyclooctapyrimidine-2,4-diones. 65

Uddin, Md. Jasim.
Haterumaimides A-E, Five New Dichlorolissoclimide-Type Diterpenoids from an Ascidian, *Lissoclinum* Sp. 1039

Ueda, Ikuo.
Synthesis of Indeno[1,2-*b*]phenanthrene-Type Heterocycles by Cycloaromatization of Acyclic Non-conjugated Benzotetraynes. 887

Ueda, Katsuhiro.
Haterumaimides A-E, Five New Dichlorolissoclimide-Type Diterpenoids from an Ascidian, *Lissoclinum* Sp. 1039

Ueda, Toshihiro.
A Practical Route to Quinolines from Anilines. 105

Uemura, Daisuke.
Haterumaimides A-E, Five New Dichlorolissoclimide-Type Diterpenoids from an Ascidian, *Lissoclinum* Sp. 1039

Uenishi, Jun'ichi.
Stereospecific Substitution of 1-(2-Pyridinyl)ethyl Methanesulfonate with *S*- and *O*-Nucleophiles. 735

Uenishi, Jun'ichi.
Regioselective Synthesis of Bridged Azabicyclic Compounds Using Radical Translocation/Cyclization Reactions of 4-Alkynyl-1-(*o*-iodobenzoyl)piperidines. 747

Ueno, Akihiko.
A Molecule Detection Sensor of Modified Cyclodextrin Based on Guest-responsive Intramolecular Fluorescence Quenching. 597

Ueno, Fukuko.
Synthesis of Indeno[1,2-*b*]phenanthrene-Type Heterocycles by Cycloaromatization of Acyclic Non-conjugated Benzotetraynes. 887

Ugawa, Kohei.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Uno, Hidemitsu.
Preparation of Meso-unsubstituted Porphyrins Substituted with Mono- and Tetraformyl and Other Electron-withdrawing Groups. 705

Ura, Yasuyuki.
Preparation of Benzoheterocycles Containing Group 14 Elements Using Zirconacyclopentadienes. 943

Utsumi, Kyoko.
Carbon-13 Spin-Lattice Relaxation Time (T_1) for Assignment of Brominated Carbons. 577

V

van Eis, Maurice J.
3-Aza[5]metacyclophanes: Synthesis and Reactions. 799

van Es, Daniël S.
3-Aza[5]metacyclophanes: Synthesis and Reactions. 799

W

Wada, Akio.

A Convenient Determination of Chiral Pteridines; Application of Fluorescence Detected Circular Dichroism (FDCD) to the Major Pterin from *Escherichia coli*. 283

Wakabayashi, Akihito.
Intramolecular Oxymercuration of 4-Hexen-1-ols: Kinetic *vs.* Thermodynamic Products Regulated by Mercuric Salts. 629

Wakabayashi, Hidetsugu.
Syntheses and Properties of Tetraazaazulenocoronands and Octaazaazulenocryptand. 87

Wakahara, Takatsugu.
Photoinduced Electron-Transfer Reactions between C_{60} and Cyclic Disiliranes (c-R_2Si-X-SiR_2; X=SiR_2, CH_2, O, NPh, S). 777

Wang, Dao-Lin.
New Synthetic Approach to Azuleno[1,2-*c*]pyrroles and Conversion to Benz[*a*]azulenes. 647

Wang, Yunxia.
[2_2]Metacyclophanedienes with Furan Bridges. 249

Ward, Timothy R.
[2_2]Metacyclophanedienes with Furan Bridges. 249

Watanabe, Hiroyoshi.
Synthesis and Properties of Novel Medium-sized Heterocyclic Compounds Containing Two Sulfur Atoms in the Ring and Synthetic Approaches to Conjugated Cyclic Disulfonium Ylides. 139

Watanabe, Takashi.
Asymmetric Pauson-Khand Reactions of Chiral Sulfinamides: Asymmetric Synthesis of 3-Azabicyclo[3.3.0]oct-5-en-7-one Derivatives. 73

Watanabe, Toshiko.
Alternative Synthesis of B/C-*cis* Hexahydrobenzo[*c*]-phenanthridine from 2-Phenyl-1-tetralone. 433

Wataya, Yusuke.
Synthesis of a Novel Artemisinin Analogue Having Potent Antimalarial Activity. 607

Wojciechowski, Krzysztof.
Nucleophilic Aromatic Substitution of Hydrogen as a Tool for the Synthesis of Indole and Quinoline Derivatives. 445

Wurst, Klaus.
Synthesis and Pharmacological Evaluation of 18,19-Dehydrobuprenorphine. 989

X

Xu, Feng.
Preparation of Benzoheterocycles Containing Group 14 Elements Using Zirconacyclopentadienes. 943

Y

Yamada, Fumio.
Syntheses of Wasabi Phytoalexin (Methyl 1-Methoxyindole-3-carboxylate) and Its 5-Iodo Derivative, and Their Nucleophilic Substitution Reactions. 425

Yamada, Masahiro.
Generation and Amphoteric Redox Properties of Novel Neutral Radicals with the TTF-TCNQ Hybrid Structure. 387

Yamaguchi, Kyoko.
Preparation, Structure, and Properties of 1,3-Bis(1,4-dithiafulven-6-yl)azulenes. 377

Yamasaki, Toshinao.
A Molecule Detection Sensor of Modified Cyclodextrin Based on Guest-responsive Intramolecular Fluorescence Quenching. 597

Yamashita, Hiroshi.
An Efficient Synthesis of Optical Isomers of Vasopressin V_2 Receptor Antagonist OPC-41061 by Lipase-catalyzed Enantioselective Transesterification. 131

Yamashita, Yoshiro.
Preparation, Structure, and Properties of 1,3-Bis(1,4-dithiafulven-6-yl)azulenes. 377

Yamauchi, Takayasu.
Photosubstitution Reaction of Cyanoaromatics with Aliphatic Amides. 1027

Yamori, Takao.
An Efficient and Expeditious Synthesis of a Novel 5*H*-Naphth[1',2':5,6][1,4]oxazino[2,3-*b*]quinoxalin-5-one and Its Unique Inhibitory Activity against a Panel of Human Cancer Cell Lines. 619

Yan, Yong Zhe.
1,3-Dipolar Cycloadditions of 3-Bromo-1,5- and 3-Bromo-1,7-azulenequinones with Diazomethane, Diphenylnitrilimine, and Benzonitrile Oxide. 291

Yanagimoto, Sachiko.
Synthesis, Structure and Spectroscopic Characteristics of 2'-Boryl-4"-dimethylaminochalcones. Effect of an Intramolecular Boron-Oxygen Coordinate Bond to the Conjugated System. 929

Yanamoto, Yoshimasa.
Enantiocontrol in Tandem Allylic Sulfonium Ylide Generation and [2,3] Sigmatropic Rearrangement Catalyzed by Chiral Dirhodium(II) Complexes. 623

Yano, Shigenobu.
Synthesis, Structure and Spectroscopic Characteristics of 2'-Boryl-4"-dimethylaminochalcones. Effect of an Intramolecular Boron-Oxygen Coordinate Bond to the Conju-

gated System. 929

Yaso, Hideyuki.
Total Syntheses of Plagiochins A and D, Macrocyclic Bis(bibenzyls), by Pd(0) Catalyzed Intramolecular Stille-Kelly Reaction. 259

Yasuraoka, Katsuaki.
Preparation of New Nitrogen-bridged Heterocycles. 50. Syntheses of Some Heterocyclic Compounds Starting from Pyridinium 1-(Ethoxycarbonylacetyl)methylides. 185

Yokota, Wakako.
Synthetic Studies on Halichlorine and Pinnaic Acid: Palladium-mediated Construction of the Bicyclic Spiro Core. 871

Yokoyama, Ryuji.
An Efficient Preparation of 2*H*-Cyclohepta[*b*]furan-2-ones. 679

Yonemitsu, Osamu.
Stereospecific Substitution of 1-(2-Pyridinyl)ethyl Methanesulfonate with *S*- and *O*-Nucleophiles. 735

Yoneyama, Naoki.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Yoo, Dong Jin.
Synthesis of a Macroheterocyclic Compound through Photodecarboxylation of Potassium ω-Phthalimidoalkynoate. 1049

Yoshida, Akio.
A Molecule Detection Sensor of Modified Cyclodextrin Based on Guest-responsive Intramolecular Fluorescence Quenching. 597

Yoshida, Makoto.
Alternative Synthesis of B/C-*cis* Hexahydrobenzo[*c*]-phenanthridine from 2-Phenyl-1-tetralone. 433

Yoshida, Makoto.
Triphosgene: A Versatile Reagent for Bischler-Napieralski Reaction. 437

Yoshida, Masato.
Syntheses, Structure and Conducting Properties of Halogenated Ethylenedioxytetrathiafulvalenes. 833

Yoshida, Sadamu.
An Efficient and Expeditious Synthesis of a Novel 5*H*-Naphth[1',2':5,6][1,4]oxazino[2,3-*b*]quinoxalin-5-one and Its Unique Inhibitory Activity against a Panel of Human Cancer Cell Lines. 619

Yoshida, Shigeo.
Efficient and Stereoselective β-Epoxidation of the 16(17)-Double Bond of Gibberellic Acid Derivatives with an Acylperoxy Radical Generated by Irradiation of α-Diketones and Oxygen. 81

Yoshikawa, Masayuki.
Chemical Constituents of Two Oriental Orchids, *Calanthe discolor* and *C. liukiuensis*: Precursor Indole Glycoside of Tryptanthrin and Indirubin. 957

Z

Zhang, Shujun.
Two Taxoids from *Taxus cuspidata* as Modulators of Multidrag Resistant Tumor Cells. 999

Zjawiony, Jordan K.
The Identification, Mechanism, and Improved Synthesis of a New and Unique Heterocyclic System with a Fused Imidazole Ring. 721

Zuo, Shengli.
Synthesis and Properties of *anti*-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione, *anti*-5,14-Epithia-7,12-methanofuro[3,4-*e*][14]annulene-5,13-diones, and Their Ionic Species. 159

Subject Index Volume 54, 2001

A

1-Acetylazulene 647
Acetylene Biscobalthexacarbony 789
Acid-catalyzed Condensation 667
Acid Cyclization 789
α-Acylamino Radical 747
Acylating Agent 561
Acyldioxolane 585
N-Acyliminium Ion 275
Acylperoxy Radical 81
N-Acylthreonine 201
Aldol Reaction 101
Aliphatic Amide 1027
Alkali Metal Picrate Extraction 151
Alkaloid 55
Alkylamino Epoxide 77
Alkylation 593
α-Alkylation of *N*-Acylpyrazole 309
Alkyl Halide 593
Allene 611
α-Alloyohimbine 43
Allylic Addition 581
Allylic Substitution 419
Alternariolide 917
AM1 Method 55
(-)-Ambrox 529
Amide 1011
D-Amino Acid 727
α-Amino Aldehyde 581
6-Amino-1-azafulvene 209
Ammonium Carboxylate 593
AM-Toxin 917
Analgesic 989
Aniline 105, 647
Antibacterial Activity 359
Anticancer Agent 561
Anticancer Compound 111
Antifungal Activity 721
Antifungal Agent 581
Antimalarial Activity 607
Antioxidant 901
Artemisinin 607
α-Aryl Amide 1027
Aryne 249
Aspergillus niger 529
Asymmetric Bicyclic Nitroxide 217
Asymmetric Hetero Diels-Alder Reaction 395
Asymmetric Reaction 615
Asymmetric Synthesis 585
2-Azabicyclo[2.2.1]hept-5-en-3-one 405
2-Azabicyclo[3.2.1]octane 747
Azacrown Ether 439
1-Azadiene 1095
Aza-di-π-methane Rearrangement 61
8-Azaheptafulvene 209
Azanaphthoquinone Annelated Pyrrole 111
2-Azanorbornyloxazolidine 411
[2]Azepine 275
Azomethine Ylide 691
Azulene 377, 667
Azulenequinone 439
Azulenocoronand 87
Azulenodiisoxazole 291
Azulenoid 87
Azulenopyrazole 291
Azuleno[1,2-*c*]pyrrole 647

B

Baker's Yeast 871
Barbituric Acid Derivative 171, 601
Barton-Zard Pyrrole Synthesis 705
Basicity 667
1*H*-2-Benzazepine 967
Benz[*a*]azulene 647
Benzodithiacyclotetradecin 139
Benzo[*b*]fluorene 887
Benzofuran 825
Benzogermacycle 943
Benzoheterocycle 943
Benzonitrile Oxide 291
Benzo[*c*]phenanthridinium Chloride 437
Benzosilacycle 943
Benzostannacycle 943
Benzotetrayne 887

Benzotriazole 301
Benzyloxymethyl Group 109
BF_3 Et_2O 967
Binding Constant 329, 597
Biosynthesis 1139
Bischler-Napieralski Reaction 433
Blastmycinone 69
Bond-switching 65
Botryospaeria dothidea 529
Brittle Star 577
Bromination 825
3-Bromoazulenequinone 291
5-Bromobenzofuran 825
Bromonium Ion 49
Brucine 405
Bryophyte 1057
Bulky Group 635
Buprenorphine Analogue 989
Butadiyne 139
γ-Butyrolactone 69, 1033

C

C_{60} 777
Cage Compound 151
Calanthe discolor 957
Calanthe liukiuensis 957
Calanthoside 957
Capto-dative Effect 1021
Carbanion 445
Carbonylative Cross-Coupling Reaction 985
Cascade Reaction 43
Catalytic Asymmetric Synthesis 411
Cation Complexation 123
Cationic Cyclization 275
Ce(IV) 171
Chemical Modification 497
Chemical Shift Simulation 849
Chiral Dirhodium(II) Complex 623
Chiral Ligand 419
Chiral Organosulfur Group 73
Chiral Pyridine 735
Chiral Recognition 405
Chiral Secondary Alcohol 411
Chiral β-Substituted γ-Keto Ester 309
Chiral Synthesis 43
2-Chlorotropone 601
Ciguatoxin 93
Ciguatoxin ABC Segment 789
Cobalt Catalyst 73
Complexation Property 439
COSMO Method 55
Coumarin Synthesis 319
Crown Ether 151
Crownophane 123
Cryptand 87, 151
Cyanoaromatic 1027
Cyclic Bis(bibenzyl) 259
Cyclic Disilirane 777
Cyclization 101, 105, 185, 589, 619, 647, 705, 727, 747
6-*endo* Cyclization 629
5-*endo-trig* Cyclization 1021
5-*exo* Cyclization 629
Cycloaddition 185, 679
[6+2] Cycloaddition 209
[8+2] Cycloaddition 209
Cycloaromatization 887
Cyclodehydration 985
2*H*-Cyclohepta[*b*]furan-2-one 679
Cyclohepta[*b*]pyrimido[5,4-*d*]furan-8,10(9*H*)-dione 601
Cyclooctatriene 291
2-Cyclopentenone 73
Cyclophane 799
Cytotoxicity 1039

D

Danishefsky's Diene 395
cis-Decalin 765
Dehydration 437
Dehydrobuprenorphine 989
Dehydrochlorination 679
Dehydroquinoline 105
Deprotection 593
Dianionic Species 159
Diastereoselection 585
Diastereoselective Cyclization 43
Diastereoselectivity 73, 581
Diazoacetate 623
Diazomethane 291
Di(1-azulenyl)methane 667
2,3-Dibromo-2,3-dihydrobenzofuran 825
Dicationic Species 159

Dichloroketene 679
Dichlorolissoclimide 1039
Diels-Alder Reaction 249, 799
Dienophile 1095
Diethylzinc 411
1,2-Dihydroaniline 567
2,3-Dihydroazepine 567
2,7-Dihydroazepine 567
Dihydro-2,7-benzodithiecin 139
Dihydro-2,5-benzodithionin 139
Dihydropyrene 249
1,4-Dihydro-3(2*H*)-pyridazinone 237
Diketene 765
α-Diketone 81
Diketopiperazine Ring 727
Dimerization of Alkene 475
1,3-Dioxin-4-one 765
Dioxirane 615
Diphenylnitrilimine 291
1,3-Dipolar Cycloaddition 291, 611, 691
Dipole Moment 929
Diradical 571
Diterpenoid 1039
Dithiocarbonate 301
1,3-Dithiole 377
Docetaxel 561
Donor 833
Double Mannich Reaction 635

E

E. coli 283
Electrical Conductor 833
Electrochemistry 377
Electrolysis 825
Electron Acceptor 387
Electron Deficient Porphyrin 705
Electron Donor 377, 387
Enantiocontrol 623
Enantioselective Addition 411
Enantioselectivity 131
Ene Reaction 589
Enzymatic Reaction 901
anti-3,11-Epithia-1,13-methanofuro[3,4-*e*][14]annulene-2,17-dione 159
anti-6,15-Epithia-8,13-methanobenzo[*e*][14]annulene-7,14-dione 159
Epoxidation 615
Epoxy Ketone 865
Equilibrium 929
Ethoxycarbonylmethylenetriphenylphosphorane 237
Eudesmane-4,11-diol 765

F

FDCD 283
Fluorescence Intensity 597
Fluorine 589
Formenamide 433
β-Formylporphyrin 705
Frontier Orbital Control 475
Fused 1-Azaazulene 329

G

Gibberellin 81
Glucoindican 957
C-Glycosidation 789
Glycosylation 901
Grignard Reaction 309

H

Halichlorine 871
Halogenated Compound 833
Heck Reaction 43
Hemibrevetoxin B 109
Heteroaromatic Barrelene 61
Heteroazulene 601
Hetero Diels-Alder Reaction 1095
Hexahydrobenzo[*b*]furan 171
High Oxidation Potential 705
Hofmann Rearrangement 77
Host-Guest Complex 597
Host-specific Phytotoxin 917
Hydrazide 1011
Hydride Reduction 433
Hydrindanone 101
1,5-Hydrogen Transfer 747
5-Hydroxybenzazepine 131

Hydroxy Epoxide 109
β-Hydroxy Ketone 865
2-Hydroxymethylpyrrole 705
Hypervalent Iodine Compound 985

I

Imidazole 721, 757
Inclusion Complex 405
Indole 445, 577
Indole Glycoside 957
Indolizine 185
Indolizine A 611
Intermolecular Alkylation 93
Internal Acetylene 1049
Intramolecular Charge Transfer Interaction 849
Intramolecular Photocycloaddition 765
Intramolecular Trap 77
Ionic Character 571
Ionophore 351
Isocyanate 77
Isomerization 217
(*R*)-2,3-Isopropylidenedioxy-1-(2-furyl)-1-propanone 341
2-Isoxazoline-2-oxide 1033

J

Johzan 1139

K

Kelly Reaction 259
γ-Keto Ester Synthesis 309
Ketone 615
Kinetic Resolution 131

L

Lactone 593
Lanthanum Trifluoromethanesulfonate 109
Laser Photolysis 777
Lewis Acid Catalyzed Cyclization 109
Lipase-catalyzed Acetylation 69
Liquid-Liquid Extraction 123
Liquid Membrane 351
Low Density Lipoprotein 901

M

Macrocycle 87
Macroheterocyclic Compound 1049
Marine Natural Product 577
Mercuric Acetate 629
Mercuric Triflate 629
Mercury(II) Ion 351
Meropenem 497
Mesomeric Betaine 329
Metacyclophane 249
1-Methoxyindole 425
Methoxy Plenyloxy Coumarin 319
Methyl 5-Iodo-1-methoxyindole-3-carboxylate 425
Mn(III) 171
MO Calculation 329
Modulator of Multidrug Resistant Tumor Cell 999
Molecular Mechanics 849
Monapterin 283
Moraceae 639
Morphan 747
Morphinan 989
Mulberry Tree 639

N

Naphthopyrazinosemibullvalene 61
Naphthoquinoxalinosemibullvalene 61
Naphthoxazine Derivative 619
Neurotrophic Activity 259
Nitroarene 445
Nitrobenzene 597
Nitro Compound 217
3-(3-Nitrophenyl)-3-trifluoromethyldiazirine 917
Nucleophilic Addition 341
Nucleophilic Substitution 425, 439, 445

O

Octahydro-7a-hydroxyindole-2,7-dione 1021
Octalone 607
Olefin 615
Opioid 989
Optical Resolution 405
Organic Conductor 387
Organic Oxidant 601
Organoboron 929
Organometallic Addition 585
Organoselenium Reduction 865
Oxadiazole 985
6-Oxaindeno[1,2-*b*]phenanthrene 887
[1,3]Oxazepine 275
5-Oxazolone 201
Oxazol-5(4*H*)-one 1011
Oxidation 359, 679
Oxygen 81
Oxymercuration 629

P

Paclitaxel 561
Palladium 259, 871
Palladium(0) 419
Palladium-catalyzed Reaction 985
Pentamethylcyclooctapyrimidine-2,4-dione 65
Perylenedicarboximide 757
3-Phenyl-*l*-menthopyrazole 309
2-Phenyl-1-(*N*-methylformamido)naphthalene 437
Phenylsulfonylhydrazone 237
Photo-Adduct 777
Photoaffinity-Labeling 917
Photochemistry 475
[2+2] Photocycloaddition 123
Photodecarboxylative Cyclization 1049
Photo-Epoxidation 81
Photoinduced Electron Transfer 777
Photolysis 65
Photorearrangement 567
Photosubstitution Reaction 1027
Phthalimidine Synthesis 635
ω-Phthalimidoalkynoate 1049
Phytoalexin 425
Pinguisane 1057
Pinnaic Acid 871
Protease Inhibitor 77
Protonic Acid 635
Pummerer Reaction 967
Pyrazol-3-one 1011
Pyrazol-5-one 1011
Pyrene 597
3(2*H*)-Pyridazinone 237
Pyridazino[3,4-*b*]quinoxaline 359
Pyridine Derivative 667
Pyridine Ligand 735
Pyridinium Methylide 185
Pyridinium Ylide 611
Pyridinocrown Ether 123
Pyridinylethyl Alcohol 735
Pyridinylethyl Mercaptane 735
Pyrrolidine 589

Q

Quinoline 105, 445
Quinolone Analogue 359
Quinone 1095
Quinonimine Structure 619
Quinoxaline Derivative 619
Quinoxaline *N*-Oxide 359

R

Radical 301, 387
Radical Cyclization 171, 1021
Radical Reaction 101
Radical Translocation 747
Reagent Control 419
Redox System 387
Reduction 217
Reductive Amidation 433
Reductive Decomplexation 789
Regioselective Reduction 275
Ring-closing Metathesis 93
7-*endo* Ring-Opening 109
Ring Transformation 1033

S

Salcomine Oxidation 619
(Salen)chromium Complex 395
(Salen)ruthenium Complex 395
Salicylaldehyde 319
Salicylanilide 1011
Samarium Iodide 101, 217
Sampangine 721
Sanggenon O 639
Santanolide 865
Santonin 529
Saussureae Radix 529
2,3-Secoaromadendrane 1057
Selenium 225
Sesquiterpene Lactone 865
Sesquiterpenoid 1057
[2,3] Sigmatropic Rearrangement 623
Silybin 901
Single Electron Transfer 1027
$S_RN2(Ar)$ Reaction 799
Solvatochromism 929
Spin-Lattice Relaxation Time (T_1) 577
Spirocycle 49
Spiro Ring 871
Stereocontrolled Oxazolidinone Formation 77
Stille Reaction 259
cis-β-Structure 395
Structure-Activity Relationship 497
Substitution Reaction 735
Sulfonamide 105
Sulfonium Ylide 623
Sulfoximine 49
Sulfur 225
Sulfur Bridged Annulene 159
Synthetic Auxiliary 635

T

Tautomer 65
Tautomerism 55
Taxane Diterpene 999
Taxus cuspidata 999
Terpenetriol 585
Tertiary Furyl Carbinol 341
Tetraazaazulenocoronand 87
Tetrahydrofuran 419
Tetrahydrooxepin 93
Tetrahydrooxocin 93
1,2,3,4-Tetrahydropyrrolo[3,2,1-*hi*]indole 799
Tetrathiafulvalene 833
Thermal Stability 757
Thermolysis 237
1,3-Thiazolidine 691
Thiazoline 201
5-Thiazolone 201
Thieno[3,4-*b*]indolizine 185
Thioketone 691
Thiolariat Ether 351
Thionation 201
Thionium Ion 967
Titanium Tetrachloride 1033
Transalkylation 225
1,2,4-Triazolo[4,3-*b*]pyridazine 1011
Tribenzo[*b,f,h*][1,4]dithiecin 139
Tributyltin Hydride 1021
Trifluoroacetic Anhydride 967
Trifluoromethyl Group 589
Trimethylsilylketene 209
1,2,4-Trioxane 607
Triplet Sensitization 567
Troponoid 351
TTF 225

V

Valence Isomerisation 249
Vinyl Acetate 131

W

Wasabi 425
Water Soluble Taxoid 561
Wittig Reaction 319

X

Xanthate 301

Z

Zirconacyclopentadiene 943